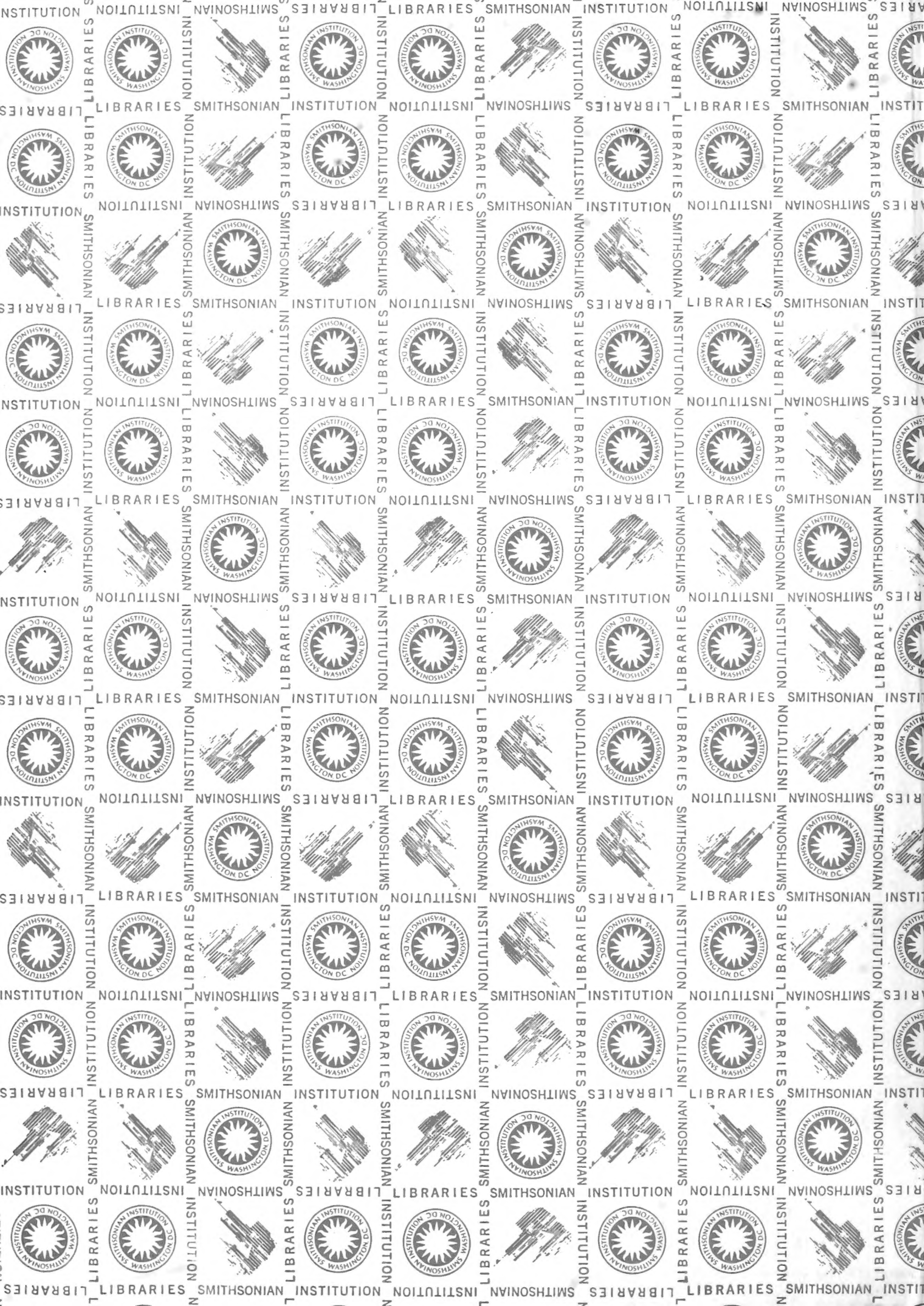
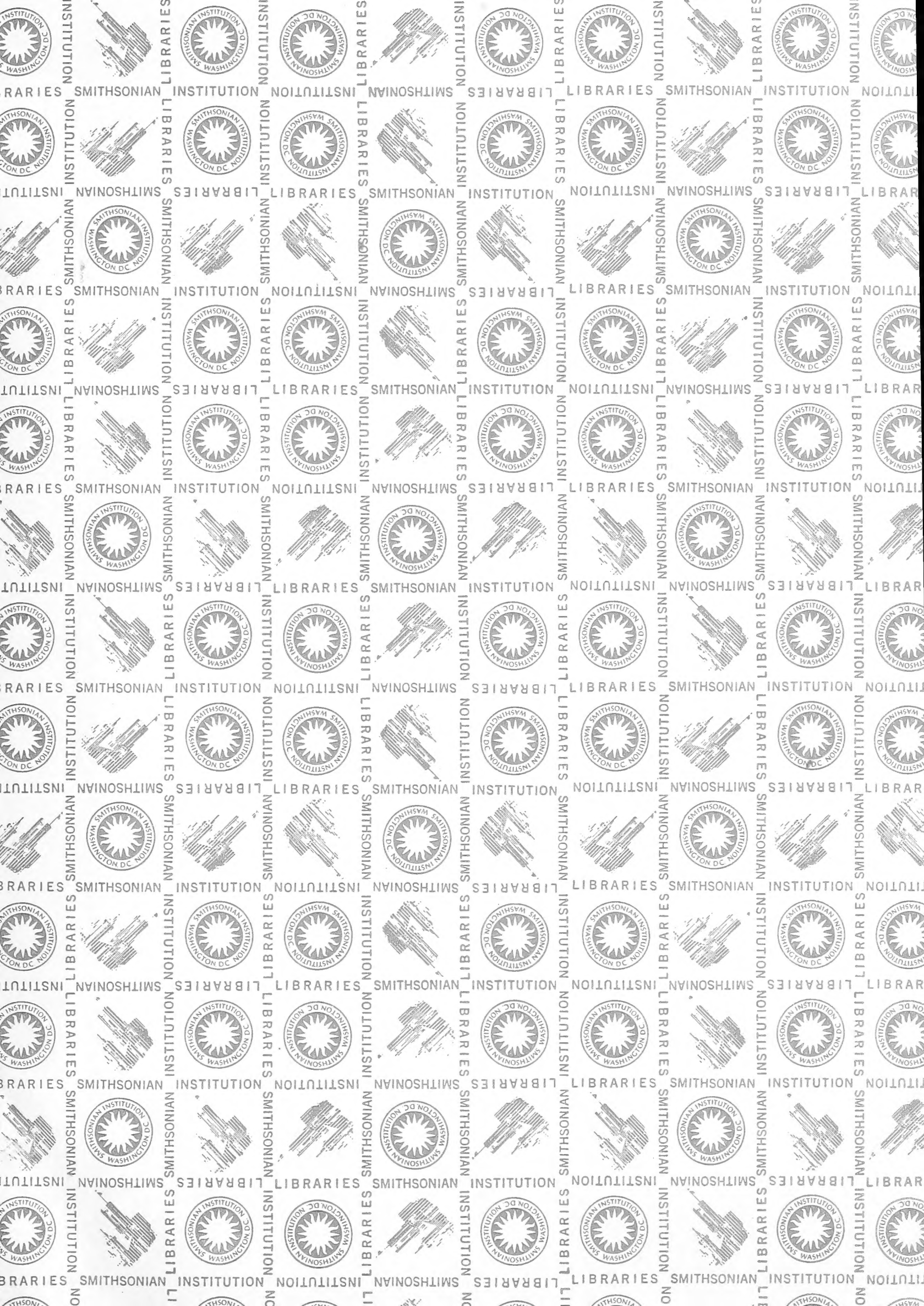


HOUSE & GARDEN'S
BOOK
of
GARDENS









A COTTAGE GARDEN FOR SPRING AND FALL

On the estate of Clarence S. Hay at Newbury, N. H., is a little cottage for spring and fall occupancy. The garden that surrounds it is filled with herbaceous plants that bloom profusely both early and late. Prentice Sanger was the landscape architect

HOUSE & GARDEN'S BOOK of GARDENS

Containing over Four Hundred Illustrations of Special Flower Types, Plans and Suggestions for Landscape Work, a Complete Gardener's Calendar of the Year's Activities, Planting and Spraying Tables, and A Portfolio of Beautiful Gardens in Varied Sections of the United States and Foreign Countries

Edited by
RICHARDSON WRIGHT
Editor of House & Garden

1921
NEW YORK
CONDÉ NAST & COMPANY

953
453
W78x
CHM

Keep

The
**HOUSE & GARDEN
BOOKS**



House & Garden's
Book of Houses



House & Garden's
Book of Interiors



House & Garden's
Book of Gardens



Copyright March 1921 by
Condé Nast & Co.



220854
MAY 16 1949

~~M
716
W954H~~

121



CONTENTS

A COTTAGE GARDEN FOR SPRING AND FALL..... <i>Prentice Sanger, L. A.</i>	2	THE LANDSCAPE PICTURE..... <i>Ralph M. Weinrichter, L. A.</i>	62
THE ROAD TO ARCADY..... <i>William B. Tubby, Architect</i>	6	THE GARDEN SEEN FROM THE AIR.....	63
THE MIRACLE WORKERS OF THE GARDEN..... <i>Richard Le Gallienne</i>	7	THE GARDEN OF DR. J. HENRY LANCASHIRE..... <i>Mrs. W. A. Hutcheson, L. A.</i>	64
DAFFODILS..... <i>Sara Hamilton Birchall</i>	7	IN THE GARDENS OF MISS ROSINA HOYT..... <i>Ferruccio Vitale, L. A.</i>	66
BUILDING THE HARDY BORDER.....	8	AN ENGLISH WALLED GARDEN.....	67
AMONG THE FIRST TO BLOOM..... <i>Marian C. Coffin, L. A.</i>	10	A HILLSIDE GARDEN IN MASSACHUSETTS..... <i>Prentice Sanger, L. A.</i>	68
FOUR OF THE ROSE FAMILIES.....	11	THE GREEK GARDEN ON THE ESTATE OF SAMUEL UNTERMYER..... <i>Welles Bosworth, Architect</i>	69
FIFTY GOOD CLIMBING ROSES.....	12	AN ENGLISH TOPIARY GARDEN..... <i>Romaine-Walker, L. A.</i>	70
A DOZEN GOOD ANNUALS.....	13	A WALL GARDEN IN THE NORTHWEST..... <i>L. M. Thielen, L. A.</i>	71
PEONIES FOR BEGINNER AND COLLECTOR.....	14	THE TWO GARDENS..... <i>Martha Brookes Hutcheson, L. A.</i>	72
BULBS.....	15	AN ORCHARD THAT IS A GARDEN..... <i>Delano & Aldrich, Architects</i>	73
IRIS FOR ALL PLACES.....	17	A GARDEN NEAR WATER..... <i>Marian C. Coffin, L. A.</i>	74
DAHLIAS.....	18	A LATTICED FORECOURT AT OYSTER BAY, L. I..... <i>Prentice Sanger, L. A.</i>	75
PLANTINGS FOR THE HOUSE FOUNDATIONS..... <i>C. S. Le Sure, L. A.</i>	19	A WALLED GARDEN IN THE WOODS.....	76
TREES AND THE HOUSE..... <i>Brown & Whiteside, Architects</i>	20	AN INTERESTING GROUP OF NORTH SHORE GARDENS.....	79
PLANTING DECIDUOUS TREES AND SHRUBS..... <i>Elizabeth Leonard Strang, L. A.</i>	21	IN THE GARDEN OF MRS. T. L. VARING, PASADENA, CAL..... <i>Myron T. Hunt, L. A.</i>	80
THE ART OF HEDGING.....	22	IN THE GARDEN OF JAMES PARMELEE..... <i>Ellen Shipman, L. A.</i>	81
THE GARDEN INSIDE THE HOUSE.....	23	THE GARDEN OF G. A. NEWHALL, HILLSBOROUGH, CAL..... <i>Lewis P. Hobart, L. A.</i>	82
MINIATURE SHRUBS.....	24	JULIAN ELTINGE'S GARDEN, LOS ANGELES, CAL..... <i>Charles G. Adams, L. A.</i>	83
A STUDY IN GARDEN TEXTURES.....	26	THE GARDEN OF THE VILLA SAN MARINO, FLORENCE, ITALY.....	84
PLANNING GARDENS OF ONE COLOR..... <i>Elizabeth Leonard Strang, L. A.</i>	27	A NEW ENGLAND GARDEN BY THE SEA.....	85
ROCK GARDENS AND THEIR ALLIES.....	31	FOR THE GOOD OF HIS BODY.....	86
THE SPIRIT OF OLD-FASHIONED GARDENS..... <i>Elizabeth Leonard Strang, L. A.</i>	34	A GUEST HOUSE AND BOULDER GARDEN..... <i>C. W. M. Harrison, L. A.</i>	87
A GLACIAL GORGE..... <i>C. W. M. Harrison, L. A.</i>	36	WATER IN ENGLISH GARDENS.....	88
THE CIRCLE IN GARDEN LAYOUT.....	37	THE GARDEN OF H. G. DALTON, CLEVELAND, O..... <i>Abram Garfield, Architect</i>	90
A NATURAL GARDEN..... <i>Vitale, Brinkerhoff & Geifert, L. A.</i>	38	BUILDING THE GARDEN.....	92
THE GARDEN POSSIBILITIES OF A CITY BACKYARD.....	39	THE FOUR STAGES OF THE GARDEN.....	94
A CITY BACKYARD GARDEN..... <i>Ruth Dean, L. A.</i>	40	GIVING THE GARDEN A RUNNING START.....	96
THE CITY GARDEN OF G. F. VAN SLYCK.....	41	THE GARDENER'S CALENDAR.....97-99-101-103-105-107-109-111-113-115-117-119	
A POOL FOR EVERY GARDEN..... <i>Ellen Shipman, L. A.</i>	42	THE BIG TWELVE IN GARDEN TOOLS.....	98
AMERICAN SCULPTURE FOR AMERICAN GARDENS..... <i>Harold A. Caparn, L. A.</i>	43	HOW TO PLANT SEEDS.....	100
THREE GARDEN HOUSES..... <i>Jack Manley Rosé</i>	45	TELLING THE TALE OF THE LIMA.....	102
POOLS TO MIRROR THE SKY.....	47	IN YOUR OWN BERRY BED.....	104
LANDSCAPING FOR A SMALL PLACE..... <i>Elizabeth Leonard Strang, L. A.</i>	48	WHEN TO PICK VEGETABLES.....	106
HOW DO YOU ENTER YOUR GARDEN?.....	50	SIMPLE SURGERY FOR FRUIT TREES.....	108
FLOWERS FOR THE GARDEN GATE..... <i>Marian C. Coffin, L. A.</i>	51	THE ART OF GROWING FRUIT UNDER GLASS.....	110
STONE ON THE GARDEN PATH.....	52	FRESH BERRIES—WITH CREAM.....	112
STEPS IN THE GARDEN..... <i>Marian C. Coffin, L. A.</i>	54	FOR FLOWERS THAT GROW IN HEAT.....	114
ARBORS, SUMMER HOUSES AND TRELLISES.....	55	WINTER BEDS FOR SUMMER CROPS.....	116
THE RIVEN ROCK.....	56	THE LAST RITES FOR THIS YEAR'S GARDEN.....	118
THE AXIS IN GARDEN DESIGN..... <i>Richard H. Pratt, 2d., L. A.</i>	57	THE CHARM OF BOXWOOD..... <i>Alfred C. Bossom, Architect</i>	120
VISTAS IN THE GARDEN.....	58	HOUSE & GARDEN'S GARDENING GUIDE.....	121
GAMES AND THE LANDSCAPE SCHEME.....	60	SPRAYING EQUIPMENT.....	124
		THE PESTS AS THEY APPEAR.....	125
		FALL PLANTING TABLE.....	126
		ADDRESSES OF LANDSCAPE ARCHITECTS, ARCHITECTS AND FLOWER AND GARDEN SOCIETIES.....	127



THE ROAD TO ARCADY

Any garden path is a road to Arcady. Set foot upon it, and inevitably the way leads out of this complex world into a lovelier kingdom where for towering structures you have the trees, for canyon street's the green hedge, for city noises the soothing of gentle winds and the music of birds and trickling water, for the city stench, the perfume of

blossoms. Doubly blest is the man whose road to Arcady lies down a garden path where flowers crop up between the flagstones, where sweet alyssum and petunias spill over the roadway and giant asters salute him as he passes. So it is in the garden of L. H. Lapham at New Canaan, Conn. William B. Tubby was the architect



THE MIRACLE WORKERS OF THE GARDEN

*In the Humbling Touch of Earth Is Found the Exalting Mystery
of the Garden's Gods*

RICHARD Le GALLIENNE

WE take gardens, as we take all our mercies nowadays, too lightly.

Recently a friend of mine, speaking of his garden, said to me that it made him very "humble". It was one of those remarks for which one grows increasingly grateful; for humility, the only attitude by which it is possible to know anything worth knowing, has become an almost extinct species of human feeling; and I am far from sure that I can safely leave my friend's remarks entirely without commentary. So few feel like him, that for many, I fear, it will have no meaning. Of course, he meant that his garden continually brought before him, so impressively, with such fresh wonder, the miracle and the mystery of the vital, the cosmic process.

No one yet knows how or why a flower grows. We have discovered radium, and employed delicate and terrible natural forces to fearful ends; but we are as far from knowing that as ever. Still, as the present writer once had the honor of saying: "A grass-seed and a thimbleful of soil set all the sciences at naught." Still Tennyson's "flower in the cranied wall" baffles all the pundits.

Unless you feel like that about your garden, you might as well have no garden. Indeed, you have no garden. You may have a dozen gardeners—but that is another matter. As a general rule, one may say: the more gardeners, the less garden. For the real garden is born, and very little made.

No one has ever really loved a garden without having had at times the sense of a divine presence dwelling there, moving softly behind curtains of leaves, some busy, watchful kindness secretly at work with blade and blossom and the mounting sap, and falling suddenly silent at our first foot-fall, like a shy bird. A fancy, of course—and yet would there be anything more remarkable in the fact of certain natural processes being presided over by especially appointed spiritual guardians than there is wonder in the processes themselves? Though there be no individual accessible divinity behind the blossoming of an apple orchard, the process itself is divine, and just as mysterious as if there were.

Numen inest, said the old Roman, with proper reverence and a profound insight in the presence of such natural manifestations; and he who does not feel, as he, that deity is present "in gardens when the eve is cool" profanes the sanctuary.

A GARDEN is indeed a sanctuary of natural religion. Upon it are concentrated the power and the glory and the tenderness of natural forces. From above and below there are focused upon it the mysterious operations of sun and rain and dew, in unison with the chemic, one feels like saying the alchemic, properties of the soil itself.

The man who looks after his own garden is continually in the presence of the inspiring strangeness, the ever new surprise and thrill of the creative marvel. He takes a bulb in his hand, dry and crackling and to all appearances dead as an Egyptian mummy. Somewhere within its tiny cerements hides the spark of life; though, should he unfold one layer after the other, he would seek in vain for its presence. So the man of science seeks for the soul of man in his body, and not finding it, pronounces it non-existent. Who would believe that this dry and dusty relic when buried an inch or two in dark earth, seemingly as unvital as itself, mere inert matter to all appearance, shall be met there in the darkness with warm awakening energies, immediately taking it into their care; that it and the earth alike are as ready to catch fire as phosphorus itself, vividly responsive one to the other; and that,

after a while, thus subterraneously nourished, fed from above also by stealing rains and dews, and hotly kissed through its mask of earth by that mighty shining which has traveled millions of miles through ethereal space, to assist at this miniature marvel, it shall jet up into the April morning, a curiously carved cone of waxen petals pouring fragrance—a hyacinth. A hyacinth—yes! But how much more to the man who has watched while it thus came into being.

I sometimes wish that Adam—the first gardener, as Hamlet's gravedigger remarked—had left the creation without names; for names have a curious way of robbing things of their proper value, and particularly of their first strangeness. Something arrests us either by its beauty or its unfamiliarity, and we immediately ask what it is. While no one tells us, we remain curious, but from the moment we hear its name, its interest for us diminishes: it takes its place in the category of familiar things, though, of course, we know no more about it than ever. So one says "a hyacinth" or "a rose" thoughtlessly, as though we knew all about them, almost indeed as though we could make them ourselves had we a mind to.

Yet the names of flowers have often, as in this case of the hyacinth, an association value which gives a lift to the imagination. It certainly adds to its magic for us to recall that this is the flower that the Greeks believed to have sprung from the grave of Hyacinthus, the beautiful youth accidentally killed by Apollo as they played at quoits together. Still one can read "Alas! Alas!" in Greek upon its petals. So long ago the flowers we love were in the world; and such associations, though they are but subsidiary to the natural inspiration of gardens, are poignant remembrances of lovely half-forgotten things, romantic lives long since ended, beautiful faces that once bent over these very flowers, or those poets who have brought them the added enchantment of their songs.

EVEN though you utterly neglect your garden, it will flame in a glory of weeds; for, first and last, it is a mystic piece of God's earth, potential with all those magical energies that of their very strength bring forth beauty. Every foot of it conceals buried treasures of untold value—gold and silver, ivory and myrrh, fretted imageries, carved chalices, and a hoard of fragrant things.



DAFFODILS

*Gray is the city as a gray-beard Jew.
Steel, paper, shoes, a thousand sordid things,
Crowd the dull windows, fill the humming hives,
Busy the piteous-eager heart of men.*

*Yet on a day when light the wafting wind
Teased the grim giant with a hint of spring,
There between buildings broke the sunlight through,
And lo! an arched dark window was ablaze
With the gold splendor of the daffodils!*

*Who said the day of miracles was done?
I saw with my two eyes, and felt my heart
Go fluting "April!" all the wintry day.
And I shall never pass that way again
Without remembrance of the swift surprise—
Here in the sun the jonquils' spendthrift gold;
At the street's end the blue, resounding sea!*

—Sara Hamilton Birchall.

BUILDING THE HARDY BORDER

*From These Selections of Herbaceous Perennials One Can Have
A Gorgeous Display Each Year*

NO scheme of garden building is at once so effective and so easily maintained as a hardy border. Perennial plants need seldom to be renewed; in fact, it sooner becomes necessary to find an outlet for the overflow than to set in new plants. This overflow, if one has started out with choice named varieties, has a commercial value. A fuller satisfaction, however, is discovered when one finds that there are enough plants to give away. For isn't at least half the joy of possession the pleasure of sharing your abundance with another? Moreover, in the herbaceous planting there is scarcely a dull moment. Growth starts with the earliest hint of warm weather and continues almost until snow flies. During the first few weeks we have the interest of rapidly developing plants. From the time the earliest flowers come, in April or May, there is a succession of bloom until late fall.

The garden lover looks forward to these recurring seasons as she anticipates the visit of an old friend. Association comes to hover about them, as about old books and the old haunts that one frequents. For the more prosaic there is the scientific interest in comparing the growth and performance of one year with another. By all means keep a note book.

The most effective location for such a planting is, probably, along the far edge of the lawn, where it will be viewed mainly from the house. Such a border may be about the foundations of the house, though this is of all locations the least desirable as it will not be seen to advantage from the windows of the house. A backyard is a

good situation, particularly if one can run the border about the yard and can spare ground for a bit of green, be it never so small, in the center.

There is nothing more charming than a walk between two borders, the double border of English gardens, a feature of endless possibilities which we in America neglect almost

altogether. This type of border, however, allows a different planting than the more usual single border, for in this case less thought need be given to its effectiveness at a distance. One might almost characterize the planting as more intimate, for it is to be seen from near at hand, and the interest is more likely to be busied with single specimens than with the broad effect of the whole. It is this broad effect that should always be kept in mind when planning and executing the single border.

The first principle to remember is that the best results are always to be obtained by simple and broad treatment. That it is better to paint from a simple palette, with a minimum of color mixing, is a maxim equally good for the painter and gardener. In either case, we are making a picture. The problem of the border is complicated by the fact that it is a series of pictures we must plan for.

Growth in a border starts, of course, simultaneously with that of the grass and the leaves on the trees. This early growth shows a variety of light, delicate greens and reddish browns that not only are beautiful in themselves, but have great diversity in habit of growth and texture and shape of leaf.

The earliest flowering plant is the lupin. Now the lupin (*Polyphyllus*, the perennial variety) comes in white, pink and blue. The white is a flower of exquisite purity and grace. The blue, however, runs to reddish tones and the usual pink lupin rather suggests lavender. There is a recently introduced lupin of a purer pink that, in



The beautiful, creamy, white-flowered dwarf phlox Tapis Blanc is without a rival for its place in the very front of the border



Inspector Elpel, a late flowering phlox, blooms well into September, when the fall asters begin. This view and the others are of the garden of John L. Rea, at Plattsburgh, N. Y., who also contributes the text



While the late peonies show the last of their glory, the delphiniums raise their heads ready to bloom

combination with the white, forms a beautiful group. The lupin is a fair sized plant, with perhaps a dozen stalks 2' to 3' tall.

By the time the lupins begin to fade the iris will come into flower. Only the so-called self-colored sorts seem sufficiently assertive to be suitable for a planting of this nature.

Mrs. H. Darwin is a most satisfactory white, of rather dwarf habit. Madame Chereau is the tall and stately variety with somewhat elongated white flowers with blue laced edges. *Pallida Dalmatica* is a large, luxuriantly growing kind, whose extra sized flowers at a little distance give the effect of a clear, delicate blue. Her Majesty, with flowers almost as large but borne on shorter stems, is soft pink with crimson markings.

We have to be especially careful in placing our irises unless we are willing to cut them off before their time, because the oriental poppies never wait for the iris season to be quite over. These with their brilliant black and scarlet coloring and great size are likely to prove rather upsetting to one's preconceived ideas of balance and harmony, unless they are carefully curbed. A good showing can be had from Rose Queen, Perry's White, Nancy, Goliath, Royal Scarlet, Beauty of Livermore.

By the first of June—in many localities, somewhat earlier—the peony plants will have altogether lost the mahogany color of their earliest stage and will have developed into picturesque mounds of deep, glossy green. Twelve standard sorts of moderate price, which give great variety in type and color of bloom and will furnish the longest possible season—from three to four weeks—are Umbellata Rosea, Rubens, Festiva Maxima, Mons. Jules Élie, Courrone d'Or, Faust, Delicatissima, Marie Jacquin, Felix Crousse, Mons. Hyppolyte Dellille, Henri Murger, Marie Lemoine.

By the third week of June, when the later peonies are in flower, the delphiniums will be reaching a considerable height, and the long, graceful spires of buds will begin to

show color. These with the Madonna lilies and the early white phloxes always follow hard on the peonies. The delphinium, or perennial larkspur, ranges in color from white through countless enchanting combinations of blue and lavender to deep blue and purple. The scarlet and so-called yellow sorts need not be considered here. For a variety of dependable blues, plant—Bleu Tendre, Rev. E. Lascelles, Hermosa, The Alake, Porcelaine Sceptre, Dusky Monarch, Mr. K. T. Caron, Progression, Perfection, King of Delphiniums, Lorenzo de Medici, Mrs. Brunton, Andrew Carnegie, Francis F. Fox, Corry, Moerheimi.

As the larkspur and lily time passes, the gorgeous phlox era comes—the former perhaps the most ethereal, the latter certainly the most brilliant phase of the garden year. Visualize these in bloom—Miss Lingard, Tapis Blanc, Frau Anton Buchner, Comte von Hochberg, Europa, Fernand Cortez, Inspector Elpel, G. A. Strohleim.

The beautiful, big, creamy white flowered dwarf, Tapis Blanc, is without a rival for the very front of the border. It grows from 1' to 1½' tall and bears large heads of large flowers. It blooms earlier than the other phloxes in this later group, usually beginning to flower just as the early white, Miss Lingard, is by its best. Tapis Blanc forms a bridge between the two seasons. Frau Anton Buchner, universally acknowledged the very best white phlox, bears equally large flowers in larger but somewhat looser heads, and grows very tall, often over 3'. This white is used for its own sake and to separate the more brilliant sorts. These brilliant colors are most effective used in considerable quantities, each by itself. Of the colored varieties, one might start with six plants each of the following:

Cortez—a rich crimson, early; G. A. Stroh-

lein—a wonderful salmon with a red eye; Europa—white with a clear red eye; Comte Von Hochberg—a deep crimson, one of the darkest colored sorts; Inspector Elpel—a rosy pink with a reddish eye, very late.

The phloxes, with their wealth of color and bloom, carry us well into September, when the various fall asters begin to flower.

The number of these Michaelmas daisies is a revelation to most people, who still suppose the lavenders of our own New England asters the only colors to be found among them. There are, however, not only these lavenders and many more, but pinks in almost pure tones, white, light and deep blue, crimson, and purple. Many of the newer varieties grow to be larger plants and bear larger flowers than those most of us know. For a good autumn showing, try St. Egwin, Beauté parfaite, Glory of Colwall, Rye-croft Purple, Rye-croft Pink, Fairfield, Mrs. S. T. Wright, Wm. Marshall, Bertha Cubitt, Mrs. Rayner, Hilda Morris, Feltham Blue.

In building a new border, start out with these rules firmly in mind:

1. Select a location, if possible, in full view from the summer living room.

2. Carefully measure the space to be planted, and make, to a convenient scale, a detailed plan showing the location of every plant to be set. This not only makes the actual planting much easier, but makes it possible to get along without the unsightly and perishable labels, for if in doubt as to a name one merely has to consult the plan.

3. In arranging the colors try to get beautiful combinations, remembering always that simplicity is a chief aid to that end. A half-dozen plants each of three or four colors are far better than the same number of plants, each in a different color.

4. Whenever practicable, obtain the best quality of plants, in named varieties.

5. Give a reasonable amount of labor and fertilizer in preparing the ground.

AMONG THE FIRST TO BLOOM

*The Crocus, An Early
Venturer Into the
Garden*

MARIAN C. COFFIN
Landscape Architect

As the first important flowers of the early spring we love the crocuses, even when only a few spring up in the grass or along the border. But how much more wonderful are they when there are hundreds upon hundreds of them! Some times they come up singly or in thinly scattered groups, perhaps only six, perhaps a dozen cups together with the sturdy, dark trunks of leafless trees rising about them



In some parts of this crocus border the bulbs are planted thick, line upon line, with the cups so near together that they are no longer seen as individual flowers, but as long-drawn splashes of color. At these spots the tree trunks act as foils and the little patches of brown earth that do manage to show between the wide-spread chalice blooms serve to deepen the coloring of the crocuses themselves



FOUR OF THE ROSE FAMILIES

*From the Hybrid Perpetuals, Teas, Hybrid Teas and Polyantha Types
The Rose Lover Makes a Selection for All-Season Bloom*

THERE are three principal groups with which the rose grower should familiarize himself—the Hybrid Perpetuals, made up of roses of mixed parentage but practically all of the hardy or perpetual type; the Tea rose, tea scented, which is not hardy except in the South or in California; and the Hybrid Teas, standing between these two rose extremes, being the offspring of the hardy Hybrid Perpetuals and the Teas, and having been developed toward hardiness as far as possible. Of course there are many other kinds and the fact that there are over four thousand species of the genus in Europe and Western Asia alone, will only confuse the amateur. Choice, then, should be made for season of bloom and varying quality and texture of flower.

The first roses to bloom are those of the Hybrid Perpetual class—the June roses—which begin usually about the 5th of June and continue on for a month. The Teas and Hybrid Teas begin later—about the 15th—and carry their first flower production until the last week

in July. Then they rest a bit, save for a few fugitive blooms, until about the end of August, when they start in once more and blossom until frost. The interval between the end of July and the end of August is filled in with two other classes, the Bengal and the Polyantha. The latter are clustered masses of small flowers usually and the bushes are not large.

The number of plants of each class which a rose garden should have must, of course, be determined by the size of the garden, but a fair proportion is two Hybrid Teas, one Bengal, one Polyantha and one Tea to each Hybrid Perpetual, or five Hybrid Teas to one Hybrid Perpetual.

Of the Hybrid Perpetuals, Baron de Bonstetton, General Jacqueminot and Prince Camille de Rohan are among the deep and velvety reds. Paul Neyron, in addition to being the largest rose in the world, is free flowering, of a fine, deep rose color. Darker than this is Marshall P. Wilder. Two good whites are Frau Karl Druschki and Margaret Dickson.

Another white is Marchioness of Londonderry. Mrs. John Laing is an abundant soft pink.

Among the Hybrid Teas, an excellent red rose is General McArthur. Betty is good for late summer, a rare shade of coppery gold overlaid with yellow. Another wonderful yellow rose is the Duchess of Wellington. Redder than flame is Gruss an Teplitz. For pale shell pink nothing has yet excelled La France.

In the Tea Rose class, Harry Kirk should lead for the yellows, seconded by Marie Van Houtte, a paler shade edged with pink. For later summer and fall bloom William R. Smith is good, although tender and requiring care.

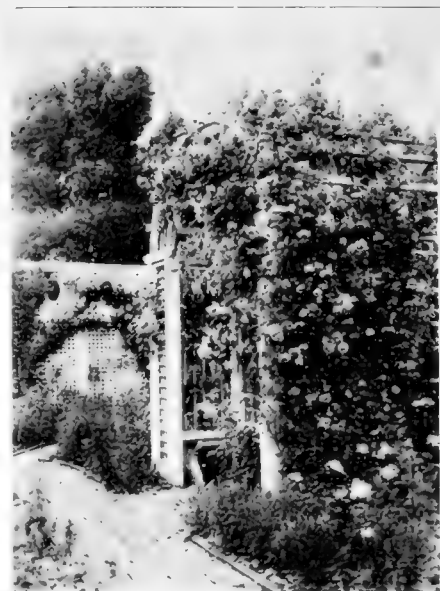
Of the Bengal roses, Hermosa is a popular choice and can be massed in beds. Countess de Cayla is another of this class, a coppery tone shaded with orange. The blushing little Clotilde Soupert is a tractable, densely petalled hybrid Polyantha, generally classed as white. Then there are Louise Walter, soft rose pink; Orleans, with flowers red as geraniums, and Yvonne Rabier, the baby white Rambler.



Roses should be given a place by themselves, and, where space permits, a special bed to each family. On the estate of Charles Harding at Dedham, Mass., the queen of flowers has a regal and abundant spot—a formal garden walled in by high architectural lattice with seats and gates at the terminals of the paths. Guy Lowell, architect

FIFTY GOOD CLIMBING ROSES

THE notes which follow are compiled from exhaustive tests covering a period of four years. In considering the results it is well to remember that they were obtained in the latitude of New York City and would not necessarily apply in all details in other sections and under different conditions. Those roses which are marked "winter kills" were killed back to root by the unusually severe winter of 1917-18, a season considerably colder than the average in this region. The varieties noted as being hardy survived that winter and consequently may be considered highly cold-resistant. The time of blooming varies approximately six days for every fifty miles' difference in latitude. Varieties prefixed by the figure 1 are considered especially good; those marked 2 are the next choices. A wise selection of a dozen or so will result in successive blooms for nearly two months.



Blooms

- June 1-7 1—Miss Helyett—(wich.) Winter kills. Fauque, 1908. Large double, blush with carmine shading. Strong, good foliage. Long season. Good stems.
May Queen—(wich.) Hardy. Conard & Jones, 1899. Delicate pink. Foliage good, weak grower. Fascinating color, with crimped petals.
Neige d'Avril—(mult.) Hardy. Small pure white flowers, profuse, semi-double. Prominent yellow stamens. Foliage fair.
- June 7-14 Ghislaine de Feligonde—(mult.) Hardy. Turbot, 1916. Practically thornless. Bud orange. Flower cream when open, foliage fair. Medium growth, very long season.
Purple East—(mult.) Hardy. Paul, 1901. Rosy pink with over color of mauve. Wonderful color in early morning. Semi-double, large, free. Foliage only fair.
2—Francois Guillot (wich.) Winter kills. Barbier, 1907. Double white. Free, vigorous. Foliage very good. Shaded yellow in bud. Long blooming season.
- June 14-24 Paul's Scarlet Climber—(wich.) Hardy. Paul, 1916. Large, vivid scarlet shaded crimson. Fine large foliage. Vigorous, unusually fine color that holds well.
Silver Moon—(mult.) Winter kills. Henderson, 1910. Very large semi-double, almost 5". Pure white, yellow stamens. Buds tinged yellow, foliage unusually good. Strong, but some years fails to bloom.
1—Christine Wright—(H. P.) Hardy. Hoopes & Thomas, 1913. Rose pink tinged yellow. Good form, fragrant. Good texture. Color lasts, long period of bloom.
Zephirin Drouhin—(Hybrid Bourbon.) Hardy. Bizot, 1868. Large single flower, wonderful silvery rose color. Petals wavy. Long season, strong bushy growth.
2—Baroness von Ittersum—(Multiflora.) Hardy. Leenders, 1910. Bright red foliage. Fairly free bloomer. Some flowers are lighter. Quite large.
August Roussel—(Macrophylla.) Hardy. Barbier, 1913. Large flowers, semi-double. Rosy salmon. Good foliage. Shaped like H.T.; like a clear pink form of Dr. Van Fleet.
Climbing Lady Ashtown—(H.T.) Hardy. Bradley, 1909. Free for H.T. Vigorous. Best climbing H.T. Has long spring season and a few autumn flowers.
Alberic Barbier—(wich.) Winter kills. Barbier, 1900. Buds yellow, flowers cream, foliage good. Young shoots bronze. Good color until it fades.
1—Paul Noel—(wich.) Hardy. Hanne, 1913. Large double, 2"-3". Bud carmine; open, deep salmon, splashed orange. Wonderful color and foliage. Long season.
2—Elisa Robichon—(wich.) Hardy. Barbier, 1902. Delicate rose tinged yellow. Free, vigorous. Foliage very good.
Chatillon Rambler—(wich.) Hardy. Nonin, 1913. Pale rose, free, strong, good foliage. Similar in form and habit to Dorothy Perkins but a shade lighter.
Gerbe Rose—(wich.) Hardy. Large double. Clear pink, strong, good foliage.
1—Gardenia—(wich.) Hardy. Manda, 1899. Bud yellow, flower cream. Good foliage, vigorous, free.
2—Renée Danielle—(wich.) Hardy. Guillot, 1913. Deep yellow in bud, pale yellow open. Very large and double. Small, isolated clusters, very fine foliage.
Mme. August Nonin—(wich.) Hardy. Nonin, 1912. Double, mauve-rose. Vigorous, good foliage, lasts well.
2—Electra—(multiflora.) Winter kills. Veitch, 1900. Deep salmon pink heavily shaded. Foliage good. Color fades but veins become more pronounced.
2—Ida Klemm—(mult.) Half winter kills. Walter, 1907. Large double, cream. Fragrant. Good form, fine foliage, long blooming season.
2—Tausendschön—(mult.) Hardy. Schmidt, 1907. Semi-double, bright pink to pure white. Color deepens in dull weather and with age. Foliage fair.

Blooms

June 24-30

- Blush Rambler—(mult.) Hardy. B. R. Cant, 1903. Clear rose, free, good growth. Good, fast color, center turns paler when old.
2—Klondyke—(wich.) Winter kills. G. Paul, 1911. Yellow bud, flowers paler. Vigorous, free, foliage good.
1—Source d'Or—(wich.) Hardy. Turbot, 1912. Buds bright yellow; open, pale yellow, large. Very faintly tinged blush. Vigorous, foliage very good.
Sanders' White—(wich.) Hardy. Sanders, 1912. Double, pure white, very free. Long season, glossy foliage, vigorous.
2—Dr. F. W. Van Fleet—(wich.) Half winter kills. Henderson, 1908. Flesh pink. Good form, foliage very good. Vigorous, fragrant.
1—American Pillar—(mult.) Half winter kills. Conard & Jones, 1909. Rose pink, light centers, good foliage and growth. Flowers freely and regularly.
1—Marie Lovett—(wich.) Half winter kills. Large, double, pure white; fine shape, vigorous. Foliage very good. Fragrant, large, waxy petals prettily curled. Beautiful bud of H.T. shape.
Debutante—(wich.) Hardy. Walsh, 1901. Soft light pink. Variable. Vigorous, foliage good. Very large clusters.
Adelaide Moule—(wich.) Hardy. Barbier, 1902. Coppery salmon, double. Foliage good, strong. Small but pretty flowers in clusters. Fades in bright weather.
2—Evergreen Gem—(wich.) Hardy. Manda, 1899. Cream, free, fragrant. Vigorous, foliage very good. Faint blush center when open.
1—Hiawatha—(wich.) Hardy. Walsh, 1904. Single. Rich scarlet, vigorous, free. Foliage good.
Sicile—(mult.) Hardy.
Coronation—(wich.) Hardy. Turner, 1912. Vivid crimson-scarlet, lighter stripes. Very free. Large strusses. Strong, foliage good.
Francois Juranville—(wich.) Winter kills. Barbier, 1906. Salmon, large, double. Foliage good.
Jean Girin—(wich.) Hardy. Girin, 1910. Salmon, double, free, vigorous, foliage good.
- July 1-7 Sodenia—(wich.) Hardy. Weigand, 1911. Very bright scarlet, with lighter edges. Free, strong, good foliage.
Ernst Grandpierre—(wich.) Hardy. Weigand, 1900. Double white, small. Free, vigorous, good foliage. Cleaner white than White Dorothy.
1—Dorothy Dennison—(wich.) Hardy. Dickson, 1907. Creamy pink. Vigorous, good foliage. Very double. Fast color, deeper in dull weather. Habit like D. Perkins. Synon, Lady Godiva.
2—Excelsa—(wich.) Hardy. Walsh, 1909. Crimson. Vigorous, free, good foliage. Brighter than crimson rambler and has decidedly better foliage.
2—Evangeline—(wich.) Hardy. Walsh, 1907. Single, blush, pretty shape. Free, vigorous, flowers large, color variable.
1—Dorothy Perkins—(wich.) Hardy. Perkins, 1901. Rose pink. Double, vigorous, free. Foliage good.
White Dorothy—(wich.) Hardy. Paul Cant, 1908. The white counterpart of Dorothy Perkins.
1—Snowdrift—(wich.) Hardy. 1910. Pure white double flowers, large clusters. Very free, vigorous growth. Good foliage.
- July 7-14 1—Gruss an Freundorf—(wich.) Hardy. Praskac, 1913. Deep crimson, light center. Semi-double, vigorous, exceptionally fine color.
Leontine Gervais—(wich.) Winter kills. Barbier, 1903. Nasturtium red, free, good growth, foliage and color.
2—Mrs. M. H. Walsh—(wich.) Hardy. Walsh, 1912. Pure white, small, free, vigorous. Foliage good, flowers very evenly distributed. Grows very tall.

A DOZEN GOOD ANNUALS

*Certain Flowers Whose Colors and Characteristics Qualify Them as
a Basis for Starting an Annual Garden*

THERE are, of course, no twelve—or fifteen, or twenty—"best" annuals. Local conditions, individual preferences, a thousand and one varying circumstances, must be taken into consideration. If we are going to set any definite limit to our list, let us call our selection merely "good" in a general sort of way, and let it go at that.

The flowers which follow are chosen with the assumption that they are to be grown under average normal conditions. Briefly, these consist of moderately rich, well-drained soil; plenty of sunlight and fresh air circulation; and freedom from the encroaching roots of trees and shrubs. Granted these, here is a basic list on which you can start an annual garden of small size.

Cosmos. Its colors are red, pink and white—great saucer-shaped blossoms borne 4' to 6' high above a mass of feathery foliage. For mass effects far into the autumn, after most of the other flowers have succumbed to the chill nights, it is unexcelled. An excellent flower for both garden effects and cutting.

Asters. Not the busy, perennial kinds with the purple and gold flowers, but the Giant Comet, King, Royal and Imperial sorts. They reach a height of 1' to 3', and furnish abundant bloom in a wide variety of colors during late summer and autumn. These asters are good not only for a variety of garden effects, but

also for cutting and display in the house.

Alyssum. Free-flowering and quick-growing, a splendid bedding and edging plant which begins to bloom early in the spring and continues throughout the season. The flowers are white, profuse, and low growing; together with the foliage, they form a thick mat a few inches thick.

Snaptags. Good for border planting and as cut flowers. Long blooming season and exquisite flowers in practically every color except blue. They grow from 1' to 3' high and if given winter protection will bloom a second season. Some of the giant types are especially good for planting at the back of the bed.

Candytuft. One can hardly imagine this charming hardy flower. For edgings and bedding effects it is especially good, and it is well adapted to cutting. The blossoms are white, pink or red, borne 1' to 2' high in large heads or spikes.

Forget-Me-Not. Of all garden flowers, this comes as close as any to being a tradition. There is no need of describing it here—it's too well known.

Annual Larkspur. Not to be confused with the perennial sort. It comes in all colors except yellow, and is good for garden masses as well as cutting. Grows 2' to 3' high and closely resembles the hardy larkspur in appearance. It is a splendid flower in all respects.

Petunias. Brilliancy and wealth of blossoms, as well as marked success even under unfavorable conditions, characterize petunias. They come in all colors except yellow, grow from 1' to 1½' high, and are good for color masses and bedding effects.

Salpiglossis. Also called Velvet Flower and Painted Tongue. All colors, 1' to 2' high, desirable especially for garden effects and cutting for the house.

Phlox. An old favorite, better today than ever. All colors except blue, can be used as a cut flower as well as for color masses in the garden. Grows about 1' high. Not to be confused with the hardy perennial varieties.

Eschscholtzia or *California Poppy*. These flowers, like forget-me-nots, scarcely need description. They are so showy and free-flowering that they are particularly adapted to color masses in the house as well as outdoors. 1' to 2' high, in all colors except blue.

Sweet Peas. The sweet pea of today is a far superior flower to that of a dozen or more years ago. All the old colors are in it, and many new ones. The Spencer type is the best; many of its varieties have beautifully frilled and fluted edges on their petals. To yield the maximum returns, sweet peas should be grown in a very richly manured trench prepared to a depth of 2', as their roots demand a great deal of nourishment.



Annuals may be planted in beds by themselves, a bed or portion of a bed to one variety, or they may be used in the perennial border to give color and flower interest when the herbaceous plants are not so rich in bloom

PEONIES FOR BEGINNER AND COLLECTOR

*Selections That Will Make An Ample Foundation For
A Brilliant Display Each Spring*

THE garden without peonies is a contradiction in terms; it simply isn't, can't be a garden. For the miracle of the peonies is a yearly refreshment of soul and a delight to the eye that knows no equal.

The last iris are cut. The late pink and yellow cottage tulips are gone. The border becomes a mass of billowy green—the glistening, metallic green of the peony leaves, the gay green of iris blades, the soft fuzzy greens of fox-gloves and larkspurs, the dainty green of the growing phloxes, the stiff, cold, forbidding lily stalks. Then the miracle slowly but surely takes place—the peonies begin to bloom!

It can't be described. One's vocabulary simply won't set down that picture. All one can say to the gardener who has no peonies, "Go without that pair of new shoes, argue your wife out of that new hat, but plant peonies this fall!" Enough for a start—say twelve—will cost you less than a pair of shoes at current prices, and for the price of a lady's hat you can amaze the town.

Peonies are among the easiest plants in the garden to care for and no conjurer's art is required to make them grow. Begin with twelve this fall and order new types every year. Meanwhile, lest this text becomes an incoherent rhapsody, let us make some peony lists. These may not be perfect selections, but they are sufficient for a beginning. Or the gardener may easily procure the catalog of a specialist and choose his own varieties from those described therein.

An inexpensive list would consist of the following:

Boule de Neige—milk-white guards, center flecked with crimson, early mid-season; Couronne d'Or—pure white, yellow stamens, tipped carmine, late; Duc de Wellington—white guards, sulphur center, fragrant, late; Duchess d'Orleans—deep pink, salmon center, fragrant, mid-season; La Coquette—light pink, rose white collar, fragrant, mid-season; Louis Van Houtte—deep carmine rose, fragrant, late; Mme. Calot—pale hydrangea pink, fragrant, early; Delicatissima—pale lilac rose, mid-season; Emile Lemoine—red with silver tip, fragrant, late; Dr. Bretonneau—pale lilac rose, center tipped cream-white, fra-



At the left is Festiva maxima and at the right M. Jules Elie



Agnes Mary Kelway has borne as many as 150 blooms a season

grant, early mid-season; Comte de Paris—guards and collar violet rose, white-crimson crown, fragrant, mid-season; Princess Beatrice—guards and crown light violet rose, collar white, fragrant, mid-season.

Should the gardener desire a collection of the rarer varieties he might select the following. It represents a good selection of French and English types, with one American—Excelsior:

James Kelway—rose-white changing to milk-white, early mid-season; Excelsior—violet-purple, fragrant, early; Mireille—milk-white, center petals edged dark crimson, fragrant, very late; Livingstone—pale lilac-rose with silver tips, central petals flecked carmine; Simone Chevalier—pale lilac-rose, collar cream-white, early; La Tendresse—milk-white guards, center flecked with crimson, early; Marguerite Gerard—very pale hydrangea-pink, fading to white, late; Princess Maud—lilac-white guards, center amber-white, late; Albert Crousse—rose-white, flecked crimson,

fragrant, late; Souvenir de l'Exposition, d'Bordeaux—bluish violet-red, mid-season; Mme. Emile Lemoine—milk-white, mid-season; Festiva Maxima—white with center marked crimson.

The Japanese and single types are often preferred by peony lovers because they have a very distinct beauty of their own. In developing the peony layout of a garden it is always advisable to try a few singles at least. They play the same rôle in relation to the ordinary peony types that single roses do to the

Hybrid Teas and Hybrid Perpetual roses; they are the Polyanthas of the peony family.

The following selection comes from English and Japanese sources:

Jupiter—rosy magenta, medium tall, early; Geraldine—deep carmine-violet, mid-season; Lemon Queen—pure white with cushion of pale yellow petals; George Alexander—deep maroon; The Moor—purple-garnet, early; Gypsy—dark rose, mid-season; Cathedral—blush, center petals creamy; Albiflora, The Bride—pure white, a tall and free grower; Apple Blossom—blush-yellow in center petals; Crystal Queen—pure white; Austin Chamberlain—deep amaranth-red, early; Dragon's Head—petals pale rose striped dark crimson.



The peony bed in blossom is a place of striking beauty. Here is Couronne d'Or, pure white with a ring of yellow stamens around a central tuft of petals tipped with carmine

FALL PLANTED BULBS to BLOOM NEXT YEAR

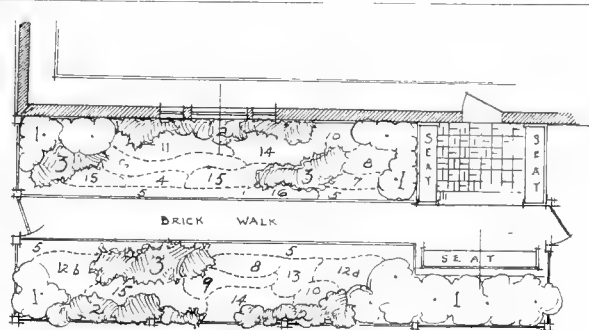
Long Lived and Dependable, the Hardy Bulbs Need Little or No Care, But Continue Sending Up Their Showy Blossoms Season After Season

IN proportion to the effort expended, no other flowers are so effective as bulbs. They need only to be tucked in the ground in the autumn and given a slight protection of litter to repay one the following spring by a prodigality of blossoms. As the bulbs contain their own plant food they will blossom, for the first season at least, on very poor soil. They may be had in every color, and for practically every season, and are equally desirable for both outdoor and indoor decoration. One who desires a gorgeous display of color may plant thousands of the inexpensive species, or the collector may have his cultured taste gratified at greater cost.

When placed in direct competition with the showy tulips and daffodils, some of the more unusual bulbs are eclipsed. For these there may be reserved a sunny corner, possibly by the entrance where they will attract greater notice, and create an intimacy which would be denied them in the plan of a larger garden. They will also thrive better if the tops are allowed to die undisturbed instead of being removed to make way for annuals, as is necessary in conspicuous places.

Another distinct use for bulbs is in formal bedding. The day has gone by when our ideal of beauty was a fancifully shaped bed carved in the middle of the lawn and filled with a red and yellow mixture. However, a well-designed parterre has its appropriate place, preferably the terrace next the house, or perhaps the entire space at the rear of a small city lot.

A very different kind of bulb planting is that of naturalizing in colonies or drifts. Since their beauty consists in the massing of large quantities together, usually any mixture of kinds is to be avoided. In this case the bulbs are allowed to multiply undisturbed year after year. They succeed best



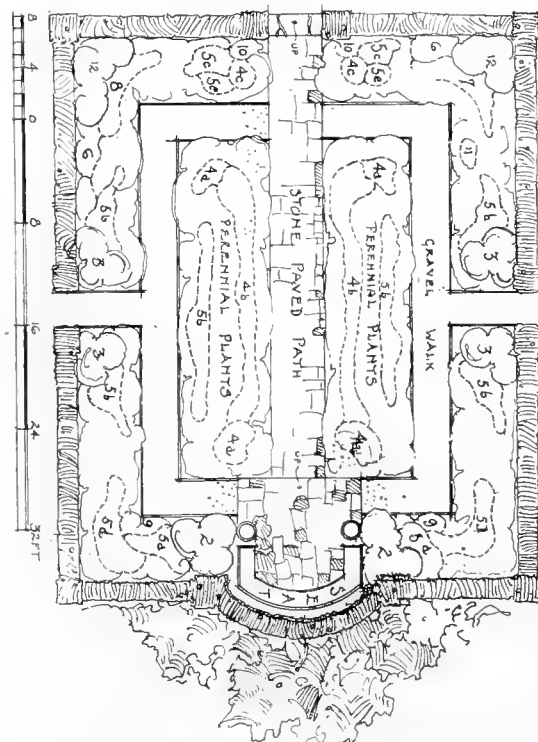
A BORDER OF MINIATURE BULBS

PLANTS

1. *Forsythia intermedia*, Golden bell, for yellow bloom at time of bulbs, 10 plants, 3' apart, 2'-3' high.
2. *Evonymus radicans*, climbing evergreen evonymus, 22 plants, 2' apart, 2 years.
3. *Taxus canadensis*, American yew, evergreen with red berries in July. Shade. 7 plants, 3' apart, 12" spread.

BULBS

4. *Galanthus nivalis*, snowdrops, white, green spot, 4"-6", March-April. Sun or ½ shade.
5. *Crocus*, mammoth golden yellow, 6"-8", mid-March-late April, sun or ½ shade.
6. *Scilla sibirica*, Siberian squill, deep blue, 2"-6", mid-March-early May, sun or shade.
7. *Eranthus hyemalis*, winter aconite, yellow, 3"-8", March-April, ½ shade.
8. *Muscari botryoides*, var. *Heavenly Blue*, grape hyacinth, deep blue, 6"-8", April-May, sun or ½ shade.
9. *Fritillaria meleagris*, pure white, checkered fritillary, 10"-12", late April-late May, sun or shade.
10. *Leucojum vernum*, snowflake, bell-shaped white flowers, green tips, 6"-12", April-May, ½ shade.
11. *Narcissus bulbocodium*, hoop petticoat, delicate yellow, 5"-8", late April-late May, ½ shade best, not very hardy.
12. *Allium*, onionwort:
 - a. *Aureum*, yellow, 1', mid-April-June.
 - b. *Azureum*, azure blue, 1'-2', June-July. Sun or shade.
13. *Puschkinia scilloides*, striped squill, bluish white, 4"-12", April-May, sun.
14. *Camassia esculenta*, camass, purplish blue, 1'-2', May, sun or ½ shade.
15. *Monbretia crocosmaeflora*, monbretia, orange-scarlet, gladiolus-like flowers, 2', July-August.
16. *Colchicum autumnale majus*, lavender.
- Colchicum autumnale album*, white.
- Autumn crocus, 6", September-October, ½ shade.



A TULIP GARDEN

B. Pink, in harmonizing tones:

4. Clara Butt, pink, flushed salmon rose.
- Edmée, vivid cherry rose, edged with soft old rose.
- Madame Krelage, bright lilac-rose, edged paler rose.
- Mattia, clear carmine rose, blue base.
- Professor Rauwenhof, bright cherry red, scarlet glow inside, blue base.
- Suzon, soft buff rose, bluish margin.
- Picotee, white margined deep rose.
- Inglescombe Pink, rosy, salmon flush.

where the grass is not too thick and is not cut too soon after the bulbs have bloomed. The cultivated soil around the bases of shrubs, or the edges of woodland in partial shade, are good places for naturalizing.

The majority of bulbs are, so to speak, children of the spring, but the lilies nod and beck the whole summer through. Some of them are expensive and die after a year or two, but the following are worthy of general use:

Lilium elegans, deep orange red, sun or half shade, 2', June and July.

Lilium candidum, madonna lily, fragrant, pure white, sun, 3'-5', July.

Lilium Hansonii, yellow, sun or shade, 3'-4', June and July.

Lilium tigrinum, tiger lily, orange purple-spotted, sun or half shade, mid-July to September, 2'-5'.

Lilium speciosum, spotted Japanese lily, white, reflexed petals spotted crimson-pink, fragrant, 2'-4', sun or shade, August-September.

Unlike most lilies, the madonna does best in full sun. It is often used in combination with larkspur. One secret of success is to cover the bulb with but a scant 2" of soil. The intense color of *elegans* looks best with the white of syringas. The golden yellow of *Hansonii* is an addition to any picture. The tiger lily looks particularly well with the porcelain blue of platycodons or early monkshood. The speciosum lilies are attractive in the garden with gypsophila or pink phlox, but are particularly suited to rhododendron soil.

The actual planting of bulbs is not a matter to be gone into hit-or-miss. Few if any of them can stand wet soil before their roots develop, so if the location is one with heavy soil it is advisable to bed each bulb in sand, making the planting hole somewhat deeper than is actually needed for the bulb itself and using the sand to fill up this difference.

PLANTS

1. *Tsuga canadensis*, American hemlock. Hedge, 85 plants, 2' apart, 1½' high. Specimens outside garden, 5 plants 4'-4½'.
2. *Spiraea Van Houttei*, 2 plants, 3'-3½' high, Van Houtte's spiraea, white.
3. *Deutzia Lemoinei*, 4 plants, 2'-3' high, Lemoine's deutzia, white for contrast.

BULBS

4. Early tulips:

A. Yellow:

- *3. Primrose Queen, primrose edged canary.
2. *Chrysolora*, clear golden yellow.
- B. Pink, in harmonizing tones:
 3. Pink Beauty, vivid cherry rose, center of petal striped white, yellow base.
 - Rose Luisante, brilliant deep rose pink.
 - Queen of the Netherlands, soft pale rose flushed white, yellow base.
 - Queen of Pinks, deep pink, white flush on outer petals.
 - Rose Gris-de-lin, carmine rose shaded fawn, margin creamy white.
 - Prosperine, rosy carmine, white base marked slate blue, striking.

C. White:

2. White Hawk, pure white, large globular flower.
4. White Swan, pure white, oval flower.
5. May-flowering (Cottage and Darwin) tulips:
 - A. Yellow:
 2. Bouton d'Or, deep chrome yellow, black anthers, cup-shaped flower.
 1. Moonlight, luminous canary yellow, long oval flower.

C. White:

2. La Candeur, pure white, tinged pale rose when opening.
3. Painted Lady, cream white, tinged heliotrope when opening.

D. Lavender:

2. Dream, pale heliotrope with darker stripe.
1. Erguste, violet, flushed silvery white.
2. Reverend Eybank, lavender violet silvery gray flush, white base.

E. Dark tones:

1. The Sultan, maroon-black, blue base.
3. King Harold, ox-blood red, purple-black base.
2. Zulu, velvety purple-black.

6. Rembrandt tulips:
 3. Mixed varieties, striped and feathered in shades of violet, rose, maroon, and white.

7. Bybloem tulips:
 - 3 & 4. Striped and feathered rose and violet on white ground.

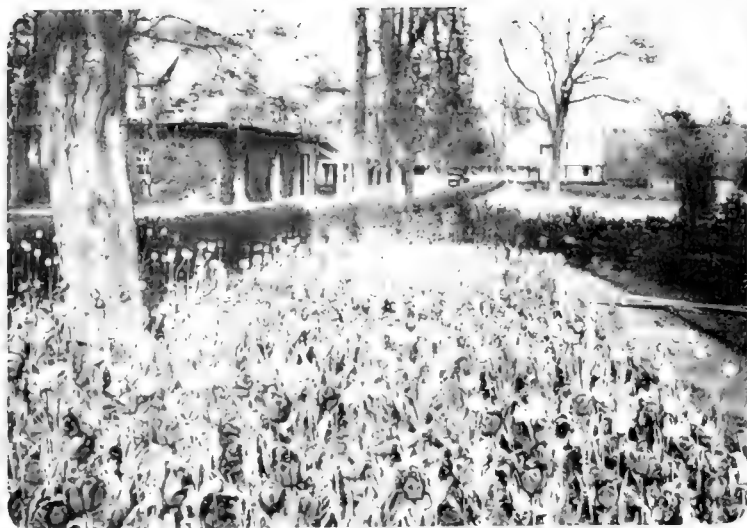
8. Bizarre tulips:
 - 3 & 4. Striped and feathered dark brown and red on yellow ground.

9. Breeder tulips, dark rich colors, dull toned or bronze-shaded, some sweet-scented:
 4. Cardinal Manning, dark rosy violet, flushed rose-brown.
 3. Chestnut, real chestnut brown.

10. Parrot tulips:
 3. Mixed varieties, laciniated edges, feathered and striped yellow, crimson, brown.

11. Double tulips:
 3. Murille, light pink.
 2. Tea Rose, saffron yellow.

*Numbers before each name refer to the relative time of bloom. All appear in April and May.



A good example of tulip border planting. The plants are not too closely set, nor are they aggressively prominent in the general scheme of the surroundings.

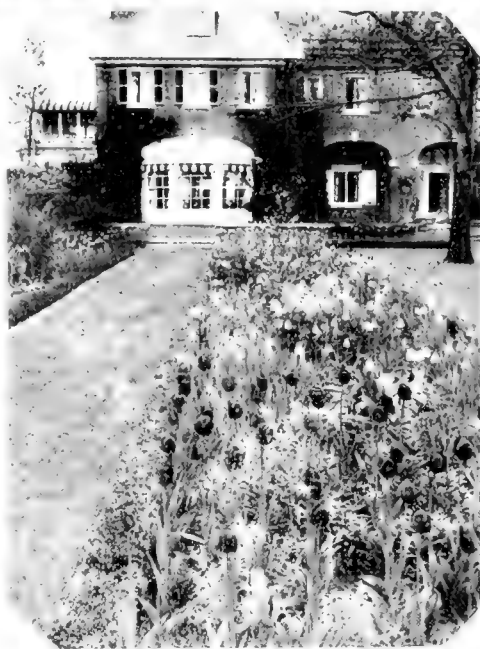


In certain settings, bulbs are invaluable as contrasts to the rest of the planting. Here Ouida and Rev. Ewbank tulips have been used in connection with evergreens.

In very heavy soil the sand layer may be 3" deep, and it should extend up around the sides of the bulbs as well as beneath them. The roots will reach out through this protecting layer and reach the nourishing soil without as soon as the time for active growth arrives.

Although it is true that bulbs will grow in almost any soil, it is also a fact that they

(Right) An excellent example of bulbs used in a perennial border for early effect. Notice how their blossoms add character to the arrangement of the other plants.



will do better if the earth around them is properly enriched. One of the best fertilizers is well rotted manure, thoroughly dug into and incorporated with the soil. Bone meal also is excellent. Put a handful of it on the surface above each bulb, and let the rains carry it down gradually. The use of both bone meal and manure is seldom necessary, or even advisable.

Another case of justifiable formal bedding, bearing about the same relation to front-lawn bulb stars that Georgian architecture does to houses of the jigsaw period.



IRIS FOR ALL PLACES

From a Bewildering Array of the Bearded, Beardless and Japanese Types Almost Any Selection Works The Miracle of Beauty

GROWING nothing but iris is one of the great garden temptations that flower-lovers have to resist. So hardy is this group, so prolific in bloom, so grateful for a little attention that one is apt to overload on iris. And yet, one can never have too much of them. Perhaps the only way to resist this temptation is to give in to it!

Save for a few types, the iris appreciates a fairly dry, sunny spot. Its rhizomes, lying close to the surface or partly through it, appreciate the sun on their backs. As the iris multiplies rapidly it should be divided every third year, preferably in the autumn. Do not crowd it too closely in the border, and if you would have it do its best, see that it receives abundant sunlight. These simple requests seem about all the iris has to make. The gardener has merely to select colors and types to suit her own particular preferences.

The range from which she can choose is almost as bewildering as the variety of peonies. Pick up the nearest catalog to hand. Of new types—82. The Germanica number 187, with 35 varied species and intermediates. There are 27 of the dwarf bearded and 24 of the beardless type, with 46 Japanese iris. Over 400 distinct kinds in one catalog, each with an individual beauty. How then is the beginning

gardener to make her selection wisely, with an eye to sufficient variety?

First locate the place or spaces that can be given to iris. Then visualize the colors that are desired. After that, except one be specializing in iris, there is nothing to do but wade in blindly and choose according to color, height and general family grouping.

The first great family is the Germanica, under which are classed many subdivisions. They bloom in May, range in color from rich yellows, soft blues, purples, clarets and bronzes to pure white, with every possible combination of these colors. Many are fragrant, and all have prominent beards. They range in size, but for general purposes the tall bearded sorts give the widest range for choice. The dwarf bearded or *Pumila* species are best used in the front of taller plantings. They flower from the end of March to the end of May, when the taller varieties take up the iris story and carry it into the summer.

The second great family is the beardless. Under this group are classed the moisture-loving types, two of which, the water flag and European yellow flag, can be grown partially in water. This class appreciates a soil kept moist by constant cultivation and containing abundant richness.

Finally there is the Japanese or *Iris Kaempferi*, a type that deserves even more attention than it is getting today. Their flowers are often 10" across and borne on stalks 3' high. They also should be fall planted, given a mellow soil, plenty of moisture during the flowering period and a dry dust mulch to prevent too rapid evaporation. They are at their best in a sunny situation, and should not be frequently disturbed.

For a general collection of the Germanica types, one that gives a good variety of colors, the beginner couldn't go wrong on: *Wyomissing*, a creamy white suffused with soft rose; *Fro*, a deep gold; *Lohengrin*, pink; *Princess Victoria Louise*, primrose yellow and reddish purple; *Mithras*, a light yellow and wine red; *Her Majesty*, rose pink and bright crimson; *Pfanenauge*, olive gold and bluish plum; *Rhein Nixe*, white and violet blue; *Spectabilis*, purple; *Bridesmaid*, lavender and white; and *Dr. Bernice*, coppery bronze and velvet crimson.

In the Japanese iris class space permits the selection of only six, but these are well worth trying: *Crane's Feathers*, white; *Mandarin*, lavender and white; *Rosy Dawn*, purplish rose; *Starry Heavens*, dark blue with yellow blotches; *Geisha*, soft purplish rose finely veined; *White Waterfall*, double white.



Iris can either stand alone or be given a shrubby background. They appreciate a warm spot, fairly dry, except the Japanese types which prefer moisture, and the water flag and European yellow flag, which can be planted in water

DAHLIAS—PERENNIAL *and* PERMANENTLY POPULAR

A Short Course in Culture: Including Preparation of the Soil, Planting, Care of the Plants Through the Growing Season, Storing for Winter, etc.

YEAR after year the dahlia plods along, adding new friends and holding the old. New and better introductions each season keep interest at a high pitch among dahlia devotees and create inspiration for more recent admirers.

One thing that makes the dahlia so popular with the masses is its absolute dependability. A mechanical expert once said about the engine of a popular automobile, "You can overheat it, boil it over, flood it with oil or neglect to oil it, and it will still run." Paraphrased, the same is true of dahlias. You are always certain of returns, no matter how neglectful or abusive you may be in your treatment of the plants. Of course, the results are always commensurate with the treatment accorded, but this one trait of yielding dividends in spite of all obstacles or neglect is this flower's greatest asset for most of us.

We may thank Mexico for the dahlia. The flowers when first introduced were all single, but after a few years under cultivation in European gardens a double variety unexpectedly appeared.



Since that time various types have been introduced, and there are now forms to suit the most critical, ranging from the little pompoms or buttons to the large, loose, peony flowered types and the cactus sorts.

There are three distinct methods of starting dahlias: from roots, cuttings, and seeds. The first is the most common method employed because it is by far the easiest; cuttings are used extensively in increasing the stock of new and desirable varieties, and are the best for commercial purposes;

seeds are used in the fascinating work of developing new varieties. This last is extremely interesting work. The flowers can be cross-fertilized by artificial means, though the great majority of dahlia growers allow the bees to perform this task for them. In this case, flowers that are to be crossed are planted in close proximity to each other. The results, of course, are problematical, as we do not actually know which or how many kinds of pollen have been deposited by the bees. But one may be sure of interesting developments.



Let the roots dry thoroughly in the sun before storing, and do not fail to label them



Dahlias like room. Three feet is the minimum distance apart each way; four feet is better



The root should be set so that the crown is at least 6" below the finished grade of the planting

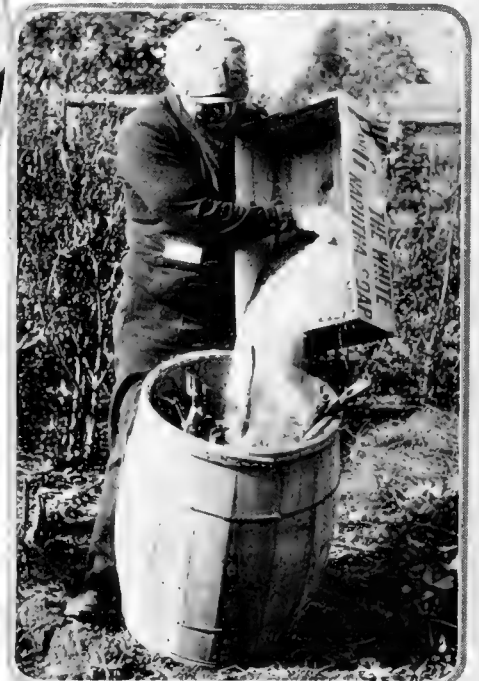
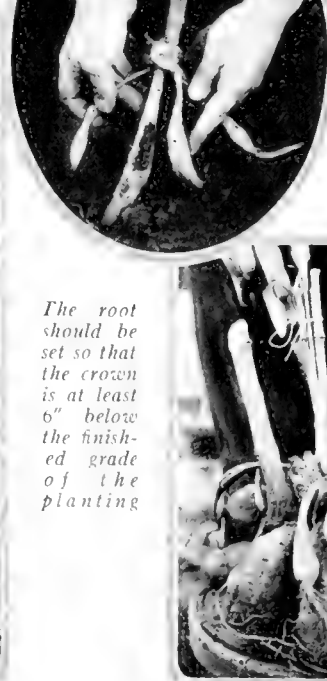


The soil should be firmed down about the roots and the hole filled in as the plant grows

Put the supporting stakes in position when the shoots have grown to be about 1' high



Divide the roots in the spring rather than in the fall—for best results



Cross-fertilizing, with its resultant development of new varieties, is extremely interesting work

Small quantities of dahlia roots can be stored in a barrel for the winter, with dry sand or sawdust

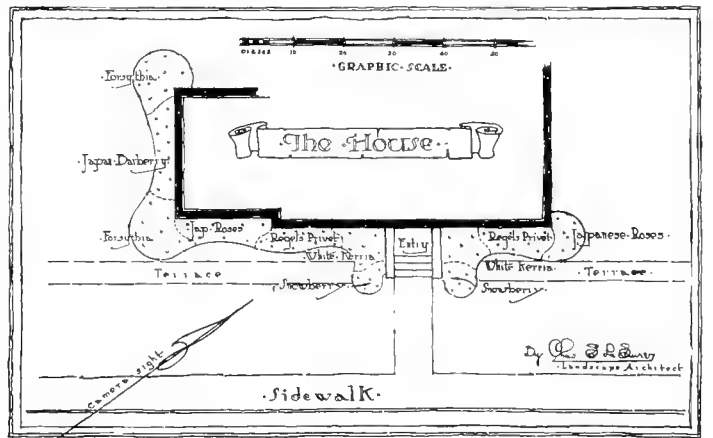
PLANTINGS FOR THE HOUSE FOUNDATION

FOUNDATION planting is essential to the completed appearance of a house and should be put in as soon as the building is finished. A new home without an effective planting is almost as incomplete as the interior without the draperies or the pictures on the walls. Neither is absolutely necessary for physical comfort, but both are needed for complete mental enjoyment.

The principles underlying this or any other type of good landscape planting are not complicated. In the first place, simplicity is of paramount importance. The reason so many places are spoiled is attributable to a desire to have every kind of plant advertised, which naturally results in a botanical collection rather than a landscape garden.

There must be variety and harmony in the shrub planting. Varieties should be selected which blend easily together to form the general mass effect. The form of the planting, or the contour of the shrubs, must be carefully considered. Variety in this respect is secured by setting taller growing kinds at the corners of the house and flanking the entrances. The other spaces may then be filled in with somewhat lower growing sorts, and the taller or accent shrubs faced with lower plants like Japanese barberry, dwarf spireas and deutzias.

The great aim of foundation planting is to tie the house to its site. Here only six kinds of shrubs have been used to obtain the desired effect. White kerria and snowberry flank the simple Colonial entrance



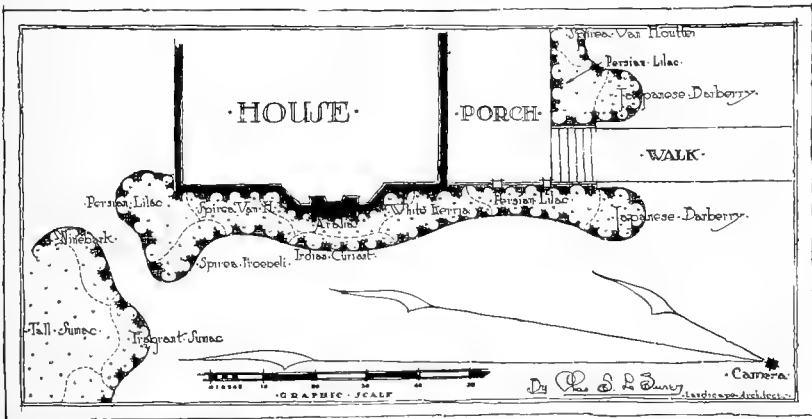
Straight, hedge-like effects should be avoided in foundation planting. The plan at the left, and the photograph of its actual planting below, embody irregularities which should exist. C. S. Le-Sure, landscape architect

Shrubs should be so selected that the planting will have general year-round beauty. There should be good flower value in spring and early summer, attractive summer foliage, brilliant autumn leaves, colored barks and fruits for fall and winter. A list of good shrubs, together with the distances apart at which they should be planted, is as follows:

Tall shrubs: white kerria, 3½'; *Aralia pentaphylla*, 3'; *Spiraea van Houttei*, 3½'; Regel's privet, 3'; English privet, 3'; Persian lilac, 4'-5'. Low shrubs: Japanese barberry, 2'-2½'; snowberry, 2'; Indian currant, 2'; spirea Anthony Waterer, 2'; *Deutzia gracilis*, 2'; *Spiraea callosa alba*, 2'; and *Stephanandra flexuosa*, 2'.

The shrubs should be planted in thoroughly prepared and fertilized beds of pleasing outline, long, smooth curves being the best, as indicated in the plans. The distance apart to plant varies with the different species. The spaded beds should be kept cultivated during the growing season until the mass occupies the entire area.

Autumn is the generally recognized season for deciduous shrub planting, since bushes set then become thoroughly established before any demands are made upon them by the growing season. But if they are planted in the spring as soon as the ground can be worked, there is no excuse for failure.





Good architecture always takes into account the existing features of the site and if those features happen to be noble trees, then half the beauty of the finished picture is already accomplished. At times it is even advisable to change the plans of a house altogether rather than destroy the tree.



TREES AND THE HOUSE

*How Trees
Make The Setting*

The house illustrating this point is a dignified interpretation of Southern Colonial, a type that requires the immediate presence of large trees and the approach of broad lawns. It is the residence of Dr. Harold Springer, at Centerville, near Wilmington, Delaware. Brown & Whiteside, architects

PLANTING
DECIDUOUS TREES
AND SHRUBS

General Principles of Arrangement
and Specific Details of Varieties,
Combinations and Groupings

FOR an immediate effect under trying conditions of soil, exposure and climate, deciduous plants are to be preferred to evergreens. In summer, they furnish luxuriant masses of green flowers, and fragrance; in autumn brilliant coloring and fruits; nor are they devoid of interest in winter, for vari-colored twigs and persistent fruits give as much cheer as the slower growing and doubly expensive conifers. The choice of deciduous material for winter effect is of more importance than is ordinarily supposed, because the texture of the twigs, whether coarse like the *Physocarpus* or fine and glossy like the *Spiraea Van Houttei*, will make a vast difference in the aspect, particularly if it is impracticable to mingle evergreens with them.

Having decided upon deciduous planting as the solution of a particular problem, the choice lies between trees and shrubs. The former are planted for shade, in avenues, as street trees, or in groups on the lawn; for the beauty of their flowers or foliage; for a utilitarian purpose like fruits or nuts; to blot out an unpleasant outlook; or to form accents or high points in massed shrubbery. Sometimes they can be used effectively as isolated "specimens", but this should be attempted cautiously.

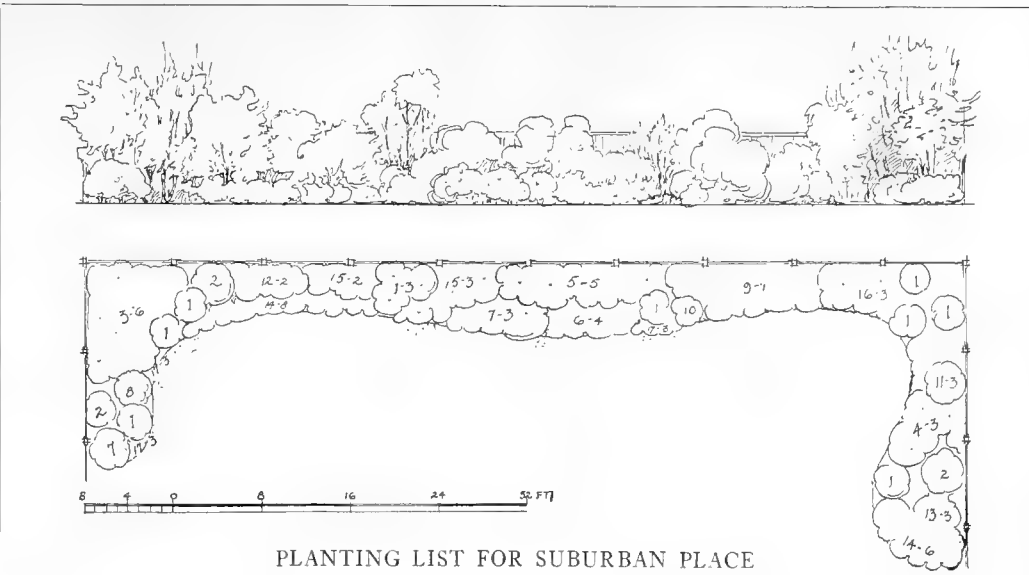
Shrub Arrangements

Shrubs should be used in masses, though occasional specimens are appropriate, such as the lilacs flanking the entrance gate or the syringa at the house corner. In planting for mass effect two main types of arrangement are to be considered:

There is the suburban place where the grass is clipped and consequently a definite bed line is required, and the shrubs present an unbroken line of green at one with the grass. Such planting needs very careful arrangement, due regard being paid to height, form, and texture of the mass, keeping the idea of bloom, fruit, or other items of individual interest subordinate to the effect as a whole. Of course, spotting of specimens about the lawn is to be avoided. It is desirable to maintain open stretches interspersed with occasional trees, and to screen the boundaries and service portions.

However, mere barrenness should not be mistaken for apparent extent. The inner margin of massed shrubs should be so varied in its contour that it shall half reveal, half conceal the ravishing glimpses which compel one to explore and classify the outlook spiritually; whereas a uniform border would actually make the place appear smaller because the entire vista would be perspected at a glance.

In planning such a border it is necessary to draw a plan showing the shapes of the masses on the ground, and an elevation showing the heights or sky line. As a rule, the greatest thickness on the plan will have a correspondingly greater height in the elevation. Avoid monotony of form in plan and elevation alike. Pointed accents, picturesque Japanese forms, and low spreading types may give variety to the softly rounded masses. In many places



PLANTING LIST FOR SUBURBAN PLACE

ELIZABETH LEONARD STRANG, Landscape Architect

TREES		SHRUBS	
	Height		Height
1. <i>Betula populifolia</i> , 11 plants, groups 2'-3' apart. Gray birch, small tree useful for effect of immediate height...	4'-6'	St. John's wort, large yellow flowers with prominent stamens in July and August; dwarf.....	2'-3'
2. <i>Acer Ginnala</i> , 3 plants, specimens. Tartarian maple, small tree to 20', red stems and fruit.....	3'	11. <i>Viburnum dentatum</i> , 3 plants, 4' apart. Arrow-wood, inconspicuous white flowers, dark blue berries, dark crimson autumn foliage. Medium size, 2'-3'...	3'-4'
3. <i>Salix pentandra</i> , 6 plants, 4' apart. Laurel leaved willow, small tree, dark glossy foliage useful for quick screen...	5'-6'	12. <i>Viburnum cassinoides</i> , 2 plants, 4' apart. Withe rod, white flowers, berries varied, rose, orange and blue, covered with whitish bloom, 2'-3'.....	3'-4'
SHRUBS		13. <i>Rhus glabra</i> , 3 plants, 2'-3' apart, close together. Smooth sumac, accentuative form, and vivid red in autumn, 2'-3' or	3'-4'
4. <i>Cornus mascula</i> , 3 plants, 4' apart. Cornelian cherry, very early yellow flower, red fruit.....	3'-4'	14. <i>Rhus aromatica</i> , 14 plants, 2 1/2' apart. Fragrant dwarf sumac, leaves out late, small yellow blossom, vivid autumn red	2'
5. <i>Syringa vulgaris</i> hybrids, 5 plants, 3' apart. Hybrid lilacs Marie LeGrave, single white; Michael Buchner, double lilac	3'-4'	15. <i>Hamamelis virginiana</i> , 3 plants, 4' apart. Witch hazel, large leaves, excellent green, small yellow flowers in November	3'-4'
6. <i>Prunus japonica rosea</i> fl. pl., 4 plants, 2 1/2' apart. Double pink flowering almond, good combination with the lilacs	2'-3'	16. <i>Viburnum opulus</i> , 3 plants, 4' apart. High bush cranberry, white flowers, large red fruits in fall and early winter	3'-4'
7. <i>Spiraea Van Houttei</i> , 4 plants, 3' apart. Van Houtte's spiraea, white flowers in May, drooping habit, faces down well	3'-4'	17. <i>Berberis Thunbergii</i> , 9 plants, 2 1/2' apart. Japanese barberry, good facer, vivid autumn red, bushy, red berries remain on the shrub all winter until pushed off by new leaves.....	2'-3'
8. <i>Erochorda grandiflora</i> , 1 plant. Pearl bush, attractive white flowers in spring. Covered with luxuriant green very early, 2'-3'.....	3'-4'		
9. <i>Lonicera Morrowi</i> , 7 plants, 3' apart. Japanese bush honeysuckle, white flowers, red fruit. Luxuriant green foliage, faces down well.....	3'-4'		
10. <i>Hypericum aureum</i> , 1 plant, specimen.			

these masses are high to shut out undesirable outlooks, in other parts low to frame pleasant views. It is not necessary that each part of the border shall be graded down in three heights, tall, medium and short, as is sometimes advocated. This tends to stiffness, but it is decidedly important that all leggy or ungainly plants shall be faced with smaller shrubs whose foliage grows closely down to the ground. Finally, having thus carefully selected and arranged the plants according to form, something attractive should be included for each season of the year, from the pussy willows and *Cornus mas* of early spring to the witch hazel of late autumn or the golden barked willows and hawthorne berries of winter.

The second type of massed shrubbery planting to be considered is on the country place where a high degree of polish is neither necessary nor desirable. This affords a delightful opportunity of creating informal woodsy plantations of mingled trees and shrubs. If properly done it need not be limited to wild sites, but may be introduced in suburban or large city places. However, it requires greater art in its execution than the first type, since the average gardener in his zeal to have everything tidy, spoils the hoped-for informality by sharp edges of turf and too much clipping. In this kind of planting the trees are set close together as they are found growing in nature, even though to do so hinders their best individual development. There is no attempt to have an unbroken wall of foliage, but the effect is more mixed, twiggy,

and open, with deep shadows and leafy undergrowth. No definite bed line is desirable, but this merging of turf with shrubbery is always a difficult problem to handle, since it entails endless labor in keeping grass and weeds away from the base of the shrubs. In the real country the grass growing long will not look out of place, but in places where greater neatness is desirable, wild violets will luxuriantly clothe the bare soil, and quite choke out all undesirable undergrowth.

Formal Uses

Still a third way of using shrubs or small trees is in an architectural way in the formal garden. A close hedge of Lombardy poplars 15' high may stand across the end as a screen, while at the sides are luxuriant green masses of honeysuckle and syringa, pruned back to encourage a dense growth. In front of the poplars the fine textured *Stephanandra* and *Spiraea Van Houttei* contribute to the garden's frame of verdure, while the service entrances are almost entirely concealed by arching privet. The flowering trees used as accents could be pink crabs or cherries, standard lilacs or snowballs, or specimen white dogwoods. The beds are edged by a low clipped hedge of Japanese barberry, with higher accents at the corners of *Spiraea Van Houttei*. Both of these shrubs are very amenable to clipping. The former is much used in regions where box is not hardy, and where an evergreen edging is too expensive or slow growing.



(Left) Barberry is one of the best low hedging shrubs, especially for the borders of paths and driveways. Its persistent scarlet berries are a winter asset.

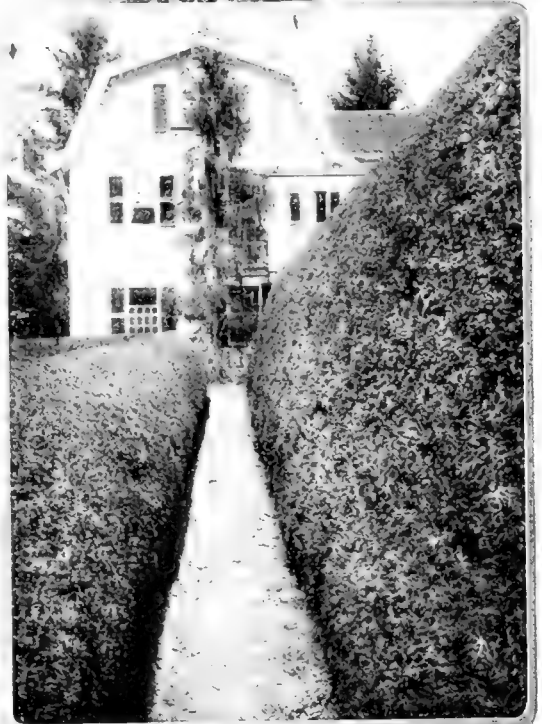
(Below) Buckthorn deserves far more attention than it has received in this country. It is hardy, tall growing, and dense when properly pruned.

For an evergreen hedge or wind-break, arborvitae is without a superior. It remains splendidly green throughout the year, and may be sheared.



During the summer the great white heads of the hydrangeas make a splendid showing along a driveway.

THE ART OF HEDGING



Another flowering hedge of great worth where formality is not required can be made of multiflora roses. Various colors can be selected, the white and pinks being especially effective.



Finally, there is the ubiquitous privet which, despite the frequency with which it is used, is the best for many situations. Some of the newer forms are more hardy than the commonly used California variety.



Where the space is large, as in a sun-room or conservatory, effective use can be made of ivy on wall lattices of various sorts. The necessary pots and other soil containers can be decorative adjuncts in themselves if well selected

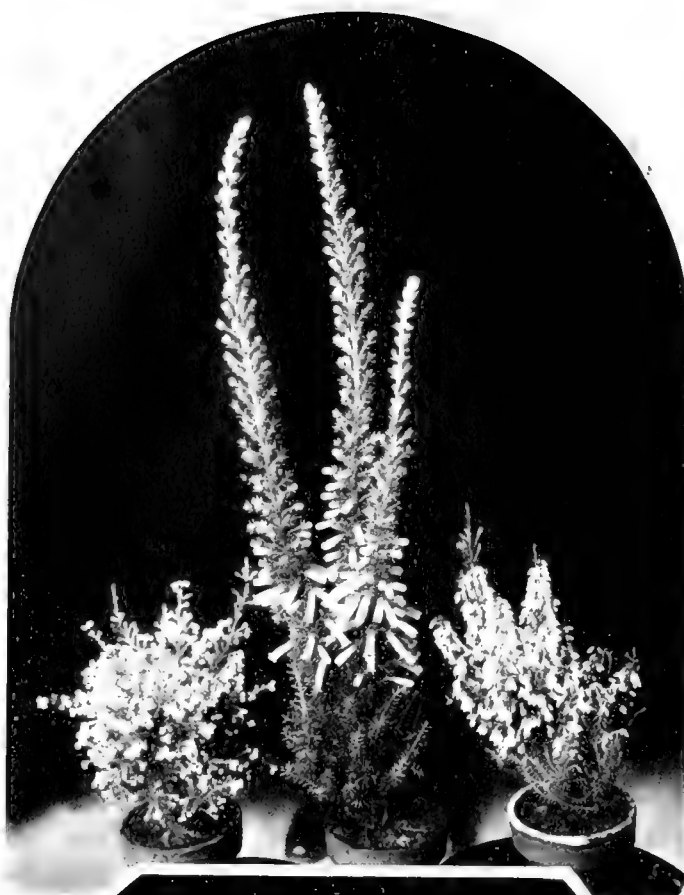


The wall fountain and tiny pool add immensely to the sun-room where their use is possible and fitting. Besides permitting the growing of aquatic plants, the water itself will help keep the air moist for the other flowers

The
GARDEN
INSIDE
the HOUSE



Erica australis is one of the varieties of heather which assume a definitely tree-like form, though in miniature.



Upper center: *Erica cupressa* has small, pink blossoms, *E. Edouard VII* (center) rose pink blossoms, and *E. codonodes* is pale pink.

Below: A white English heath which is extremely popular in this country. Compact form and small, densely massed flowers characterize it.



The flowers of *Acacia Drummondii* are in dense, drooping spikes of a pale lemon-yellow color, from 1" to 2" long.



At the left is *Erica Mediterranea*, a variety with rose, pale red or white blossoms. With protection, it should be hardy south of New York.

Another of the many varieties of heather is *President Carnot*, whose pinkish flowers suggest those of the tall Spanish form in the upper picture.

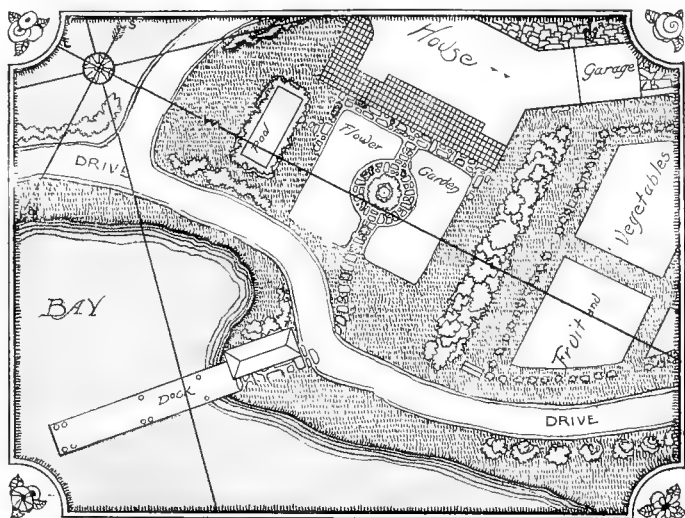


MINIATURE SHRUBS for INDOOR BLOOM

*Under Proper Conditions They Are Both
Odd and Ornamental*

THE LANDSCAPE DESIGN

*Showing the Use of Color, Plans, Paths,
Steps, Arbors, Statuary and The Other
Accessories of Garden Enrichment*





A STUDY IN GARDEN TEXTURES

Nature is generous to the gardens of Bar Harbor. However hot the day, evening always brings a cool dew to refresh the plants and assure sturdy growth. Moisture blows in from the sea, giving life to the trees and green to the lawns. This accounts for some of the rich growth in the garden of Mrs. John

S. Kennedy, a spot that affords a pleasant study in garden textures. Here is the velvet of a rich, deep lawn, here the endless play of light and shade among the phlox, delphiniums and marguerites. Above the wall Lombardy poplars sweep eloquently and the turfed alley leads gently toward the pergola in the distance

PLANNING GARDENS OF ONE COLOR

The Principles of Color Variations, Contrasts and Harmonies Applied to Gardens of Blue, Red and Yellow

WHEN we speak of a garden being of one color we mean that one color predominates, and that such flowers as have contrasting and harmonious tones are used with it to give the predominant color greater prominence. This may be interpreted in several ways—a yellow garden in spring, a blue garden in mid-summer and a red garden in the autumn. Or, if the owner's penchant for one color is very decided, the plants can be so selected as to carry that color through from spring to autumn. The color variations are infinite. Here we can discuss only gardens of blue, red and yellow.

To be effective, the flowers for a blue garden must be of a true blue color, entirely free from tones verging on lavender and violet. Inasmuch as blue is a receding color more of it must be used than is necessary in the case of strong, advancing colors like scarlet and yellow, and the effect will be weak unless employed in masses sufficiently large to overcome this tendency.

Because a garden of one color is always uninteresting, there should be added to the blue at each season a little deep, royal purple of a shade that reveals no hint of red or magenta and whose velvety richness almost equals the contrast value of black. Such a purple combined with pure sky blue achieves dazzling results. To intensify the blue in the foregoing contrast, introduce some pale yellow and creamy white. The deeper the blue, the more intense the yellow.

Accordingly the pale blue of anchusa or flax looks best with the straw color of *Iris flavescens*, and the deep cobalt of *Veronica* with the intense orange of the California poppy. It is necessary to bear in mind, however, that these contrasting tones must at all times be kept strictly subordinate

to the particular blue with which they are used.

In making the plan for the blue, or any other color garden, it is impossible to forecast the results to a nicety; but if the contrast proves too strong when the garden is in bloom, it is easy to reduce the tone by sufficient blossoms to secure the proper effect.

The location of the various plants will depend on their height and the form of the plants themselves. For example, spikes of gladiolus beside soft masses of gypsophila; larkspur in

large round masses in the center of the beds where they may dominate during their period of bloom; asters around the boundaries where they may grow inconspicuously in the fore and mid parts of the season. An early flowering plant should have a correspondingly late one in front of it, which will hide the vacant space when the former dies.

In order to test the distribution of color and bloom for each season, lay pieces of tracing paper over the plan, one piece for each season, and trace in color the masses that would be in bloom at that particular time.

These same general principles apply to any kind of color garden. The one great rule to remember is that the colors must be strong and bold and undiluted.

For a time the American gardeners had a flair for what they called pastel shades—colors diluted by white or hues diluted by black, resulting in general effects of soft pink and pale blue and mauve. These gardens were restful, but one tired of them. In the majority of cases the garden of bright, intense effects is more desirable. In the country where everything is green, a bit of bright coloring is a relief in a monotony of verdure.

This is the justification for a red garden. Skillfully place red flowers in patches against a background of red foliage with which are mingled white flowers of fine texture, and you have real beauty. Such a garden cannot be large. The choice of white flowers to combine with the red should also be limited to those of small size and soft texture or of solitary stateliness.

The larkspurs, in a wide variety of blues, supply a dominating note during June, and well on into July



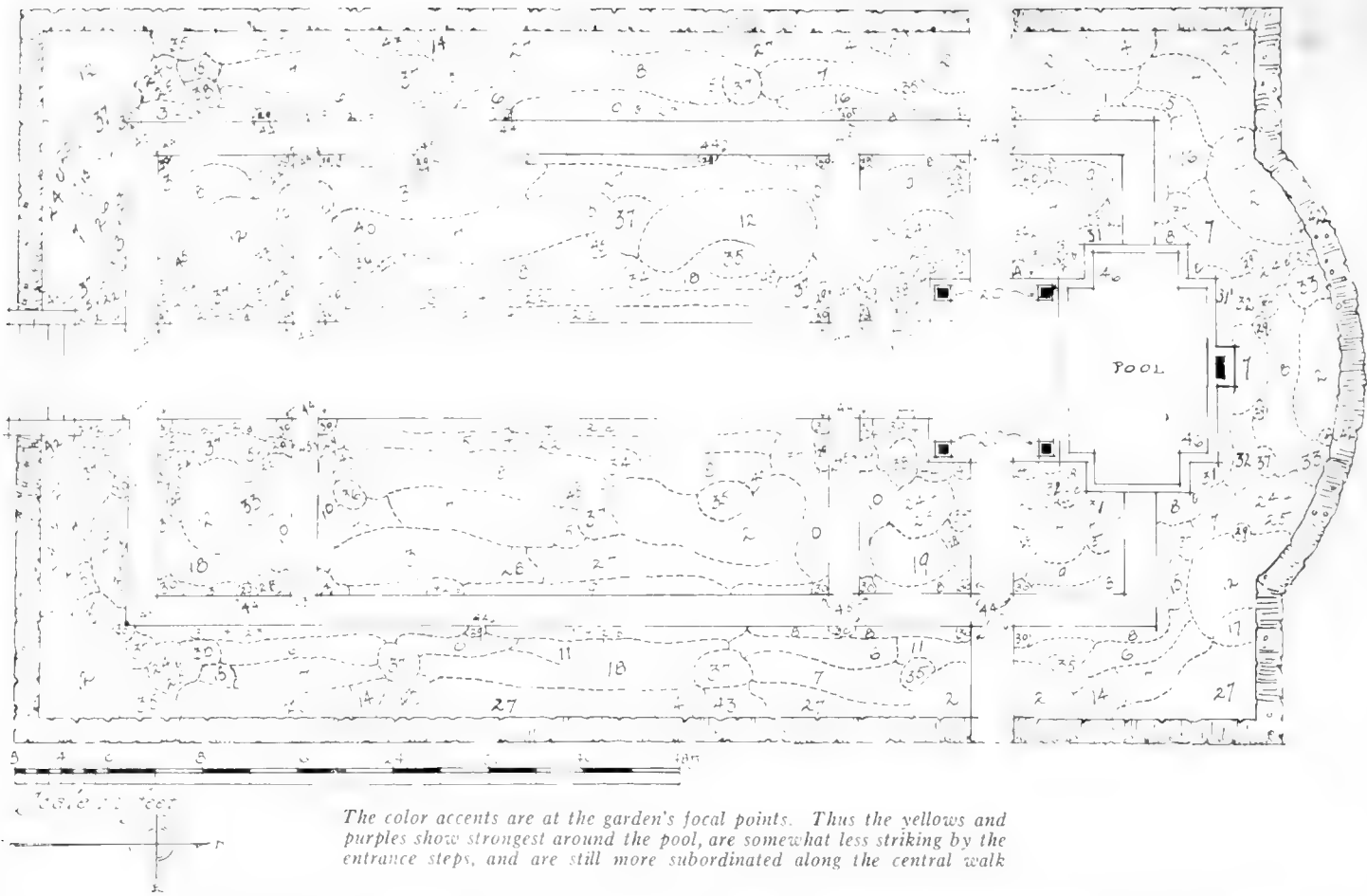
Because of their variability, it is difficult to get aquilegias of a uniform blue. But they are good for secondary positions



From early July until October the showy, light blue bells of the platycodons are one of the garden's real sights



The mertensia, or Virginia cowslip, blooms in late April and May. It is light blue, with luxuriant gray-green foliage



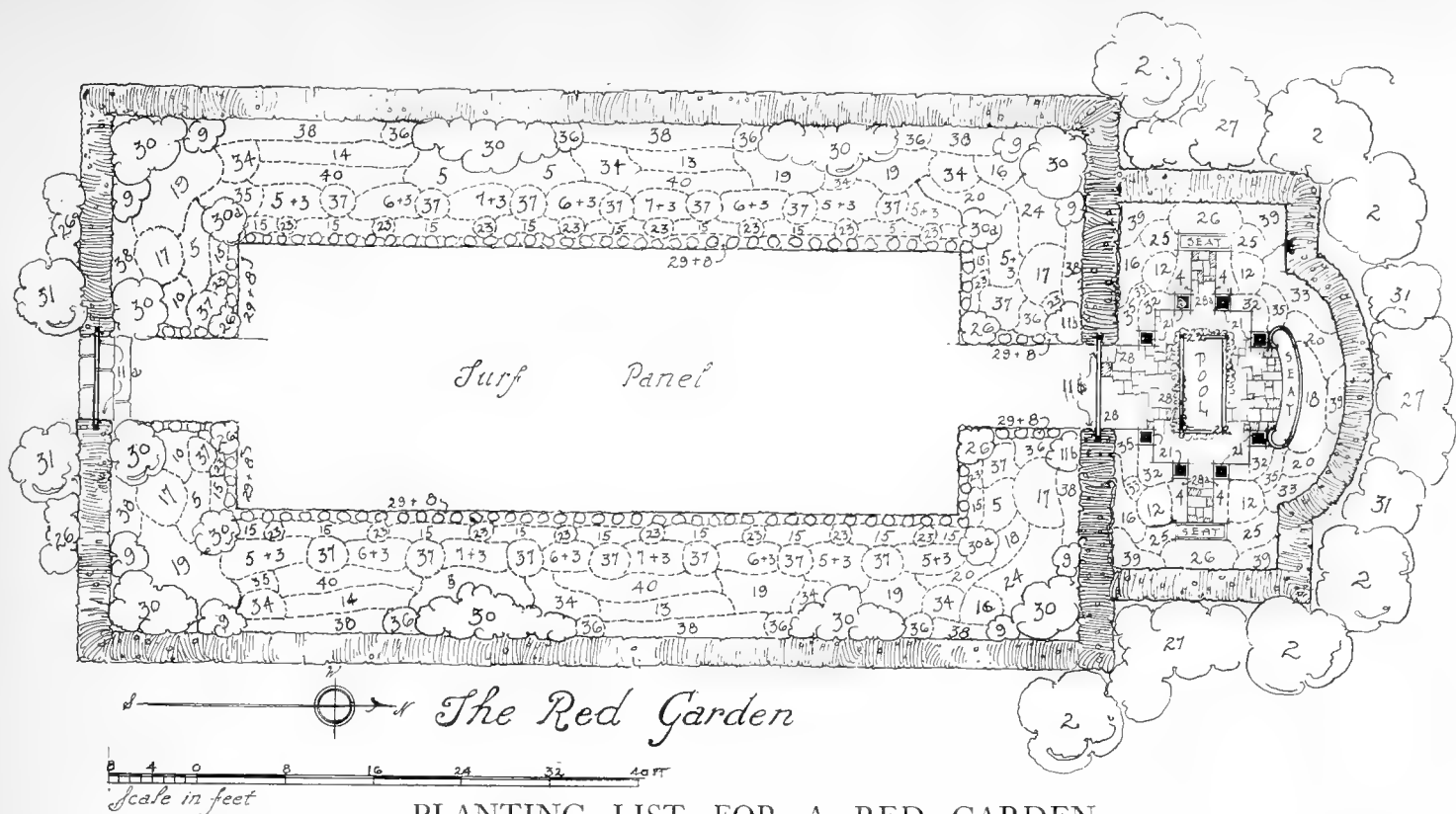
PLANTING LIST FOR A BLUE GARDEN

- SPRING BLUE**
- BULBS**
- 1. *Chionodoxa Lucida*: Glory-of-the-snow, 3"-6", mid-March to early May. Light blue, shading to white at center.
 - *2. *Scilla Sibirica*: Siberian squill, 2"-6", March and April. China blue of a greener cast than the *chionodoxa*.
 - 3. *Muscari botryoides*, var. *Heavenly Blue*: Grape hyacinth, 6"-9", April and May. Deep blue flowers in clusters.
 - 4. *Puschkinia Libanotica*: Striped squill, 4"-12", late April to early May. Bluish violet.
- PERENNIALS**
- 5. *Mertensia Virginica*: Virginia cowslip, 1'-2', late April to late May. Flowers pendant, tubular, light blue with pink buds. The luxuriant gray-green foliage dies down later in the summer.
 - *7. *Anchusa Italica*, var. *Opal*: Italian alkanet, 3', May and June. Light blue, masses well, very effective.
 - 8. *Myosotis dissitiflora*: Early forget-me-not, 6"-12", late April to July.
 - Myosotis palustris*, var. *sempervirens*: Ever-blooming forget-me-not, 6"-12", May to September. Both are light blue, the former growing tall and branching as the season advances.
 - 9. *Polemonium reptans*: Greek valerian, 6"-8", late April to early June. Creeping border plants of light blue, slightly lavender.
 - 1. *Linum perenne*: Blue flax, 18", mid-May to August. Light blue, small flower on delicate stems.
 - 11. *Aquilegia carulea*: Rocky Mountain blue columbine, 1'-2', May and June. Some of the selected hybrids are also good blues.
- SUMMER BLUE**
- *12. *Delphinium hybrids*: Larkspur, 2'-5', June and July. Many tones of dark and light blue, combining well. The variety *Belladonna* is a clear light blue.
 - 13. *Veronica maritima*: Speedwell, 2', July to September; large spikes.
 - 14. *Salvia uliginosa*: Sage, 4', June until frost. Light blue flowers with gray foliage. Looks best in background, as it is somewhat coarse.
 - 15. *Veronica longifolia* var. *subsessilis*: Speedwell, 3', mid-July, lasts a month. Deep cobalt blue spikes.
 - 16. *Eupatorium caelestinum*: Mist-flower, 1'-2', August to November. Dull blue, flat-topped clusters resembling ageratum.
 - 17. *Aconitum autumnale*: Monkshood, 4', August and September. Dull blue, shading to white.

- *18. *Platycodon grandiflorum*: Japanese bellflower, 1'-3', early July to October. Very large, showy, wide-open bells of light blue, pinker in tone than the larkspur. The same color as the *Campanula persicifolia*, which has been omitted from the June list as not quite harmonizing with the larkspur, though excellent alone.
 - 19. *Salvia azurea*: Pitcher's sage, 3'-4', August and September. Slender spikes of pale blue in great abundance, gray foliage.
 - 20. *Agapanthus umbellatus*: African lily (bulb), August. Large umbels of deep blue flowers on tall stalks. Should be grown in pots or tubs; not hardy.
 - 21. *Ageratum* (annual): Heads of blue flowers, frost-resisting.
 - a. Little Blue Star, 5", light blue.
 - b. Dwarf Blue, 9", deep blue.
 - 22. Annual larkspur: Light blue, 2', satisfactory in color and form.
 - 23. *Nemesia* (annual): Light blue, 1'. Covered with masses of small light blue flowers. Other good light blue annuals are *nemophila* with light blue cup-shaped flowers, and *nigella* or *love-in-a-mist*.
- AUTUMN BLUE**
- 24. *Aconitum Fischeri*: Monkshood, 2', September and October. Dwarf, with very large pale blue flowers.
 - 25. *Aconitum Wilsoni*: Monkshood, 5'-6', September and October. A taller variety with the same large light blue flowers.
 - *26. *Aster Nova-Belgii* var. *John Wood*, 3', September. Clear blue flowers in large clusters.
 - *27. *Aster Climax*, 5', September and October. Very large light blue flowers with yellow centers.
 - 28. *Gentiana scabra*: Japanese gentian, 2'; very late. Intense blue.
- SPRING YELLOW**
- BULBS**
- 29. *Tulipa Kaufmanniana*: A very early tulip appearing in March or April. Flowers somewhat spreading, of creamy white with primrose yellow center, the outside striped and tinged rosy red.
 - 30. *Narcissus* in pale yellow varieties.
 - Barri type: short cup, pale yellow perianth, orange eye.
 - Poetaz hybrids: short cup, in clusters on stem, pale yellow, fragrant.
 - Leedsii type: short or chalice cup, very pale creamy yellow or white.
 - 31. Tulip, Moonlight: A May-flowering variety, having globe-shaped flowers of pale luminous yellow on tall stems.
- PERENNIALS**
- 32. *Iris Germanica*, var. *flavescens*: Flower-de-luce, 2'-3', blooms in May. Very pale straw color.

- SUMMER YELLOW**
- 33. Rose, Harrison's Yellow: 3'-5', June. Small semi-double flowers completely covering the bush.
 - 34. *Thalictrum flavum*: Meadow rue, 2'-4', July and August. Tassels of greenish yellow.
 - 35. *Clematis recta*: Herbaceous Virgin's Bower, 2'-4', early June to mid-July. Creamy white mass, needs to be tied up.
 - 36. *Anthemis tinctoria*, var. *Kelwayi alba*: Yellow marguerite, 2'-3', June to October, but at its best in July. This variety is very pale yellow.
 - 37. *Gypsophila paniculata*: Baby's Breath, 2'-3', July and August. Mass of very small white flowers. Double form is also good.
- AUTUMN YELLOW**
- 38. Hardy chrysanthemum: Small golden button, 2'-3', October and November.
- SPRING PURPLE**
- BULBS**
- 39. *Crocus purpureus grandiflorus*: Large, deep purple crocus, 3"-6", March and April.
- PERENNIALS**
- 40. *Iris Germanica*, var. *Purple King*: Flower-de-luce, 2'-3', May. Of a very deep purple, one of the earliest of the family to flower.
 - 41. *Viola cornuta*, var. *Purple Queen*: Tufted pansy, 6"-8", May and June, and more or less all summer. A very deep purple.
- SUMMER PURPLE**
- 42. *Clematis Jackmanni*: Deep purple clematis, June and July. With the larkspur, a vine which should be trained on a trellis.
 - 43. *Phlox paniculata* var. *The Blue Hill*: 3'-4', August and September. Intense blackish purple.
 - 44. Purple petunias (annual): Only use a certain variety which is of deep, dark purple; none of the reddish ones.
 - 45. Purple gladioli (annual bulbs) var. *Baron Hulot*: Later summer, time of bloom depending on how late it is planted.
- AUTUMN PURPLE**
- 46. Some bloom from violas and petunias; and gladioli if planted in early July will bloom in October and November.

* Plants marked thus used for dominant effect.



PLANTING LIST FOR A RED GARDEN

SPRING
RED

- 1. *Tsuga Canadensis*, hemlock: for hedge, 3' high, 2½' apart.
- 2. *Acer rubrum*, red maple: frame planting, trees 10' to 12' high.
- 3. Early tulips: Mais, dazzling scarlet, darker inside, model form, first to bloom; Dusart, deep crimson, large, finely formed flower, second to bloom; Kohinoor, deep velvety crimson, purplish bloom, the darkest red tulip, third to bloom of the early sorts.
- 4. *Trillium erectum*, wake-robin: very dark red, medium height, late April to early June.
- 5. *Paeonia officinalis*, common garden peony: double crimson, likes half shade, mid-May to mid-June, 2'-3'.
- 6. *Paeonia tenuifolia*, red peony: large single flowers and fine feathery foliage, likes half shade, mid-May to mid-June, 1'-1½'.
- 7. *Paeonia paradoxa*, herbaceous peony: compact, dwarf plant, single crimson flowers, glaucous foliage. Half shade, late May, 1'-1½'.
- 8. Late tulips: Eclipse, glowing blood-red, steel blue base, probably the best for combination with old-fashioned peony, second to bloom, Esato, bright blood-red, rich purple bloom on outer petals; King Harold, deep ox-blood red, purple-black base, third to bloom; Inglescombe Scarlet, vermilion red, black base, fourth to bloom.
- 9. *Rhododendron hybrid*, Abraham Lincoln: very dark red.
- 10. *Dianthus cruentus*, dark red pink: June and July, 1'-1½'.
- 27. *Amelanchier Canadensis*, shad bush: small tree covered with small white flowers in March and April.

WHITE

- 28. *Sanguinaria Canadensis*, blood-root: March and early April, 3'-6".
- 28a. *Trillium grandiflorum*, large flowered wake-robin: pure white, very large flower, half shade, May to early June, 6'-12".
- 29. *Arabis alpina*, rock cress: low white, early April to late May, 6".
- 30. *Spiraea van Houttei*, Van Houtte's spirea: May, 3'-6".
- 30a. *Spiraea Contonensis*: May, lower bush but larger flowers than the above.
- 31. *Syringa vulgaris*, var. *alba*, common white lilac: May.
- 32. *Paeonia albiiflora*, var. *The Bride*: large single, faint flush rose, golden stamens, early.
- 33. *Thalictrum aquilegifolium*, feathered columbine: half shade, late May to mid-July, 1'-3'.
Thalictrum flavum, fen rue: greenish yellow, half shade, July-Aug., 2'-4'.
- 34. *Clematis recta*, herbaceous virgin's bower: sun, early June to mid-July, 2'-3'.
- 35. *Iris Kaempferi*, Japanese iris, var. *Gould Bound*: white with yellow markings, sun, June-July, 2'-3'.
- 36. *Galium Molluge*, mist flower: half shade, June to late August, 1'-3'.
- 37. *Gypsophila paniculata*, infant's breath: July-August, 2'-3'.
- 11. Climbing roses: Crimson Rambler; Silver Moon, single, large, silvery white.
- 12. *Papaver bracteatum*, oriental poppy: blood-red, late May to mid-June, 3'-4'.
- 13. *Potentilla argyrophylla*, var. *atrosanguinea*, cinquefoil: sun, June and July, 2'-3'.
- 14. *Geum atrosanguineum florepleno*, var. *Mrs. Bradshaw*: double deep crimson avens, June-July, 1'.
- 15. *Heuchera sanguinea*, coral bells: nodding red bells on red stems, June to late September, 1'-1½'.
- 16. *Monarda didyma*, bee balm: ragged blood-red heads, effective. Mid-June to early September, 1½'-2½'.
- 17. *Althaea rosea*, hollyhock: dark red selected shades. Sun, July-August, 5'-8'.
- 18. *Lobelia fulgens*, shining cardinal flower: larger, deeper red and more showy than the other, July-Aug., 2'-3'.

SUMMER
RED

- 19. *Phlox paniculata*, var. *Montagnard*: deep blood-red, July to October, 3'-4'.
- 20. *Lobelia cardinalis*, cardinal flower: August to mid-September, 2'-4'.
- 21. *Lycoris sanguinea*, blood-red amaryllis: sun, July-Aug., 1'-3'.
- 22. Tuberous begonia: deep red.
- 23. Gladioli, red varieties of pure color: Princess Orange, Governor Hanley, Cherry King.
- 24. Dahlias: J. H. Jackson, cactus, dark crimson maroon; Le Grant, decorative, velvety red shaded maroon.
- 34. *Clematis recta*, herbaceous virgin's bower: sun, early June to mid-July, 2'-3'.
- 35. *Iris Kaempferi*, Japanese iris, var. *Gould Bound*: white with yellow markings, sun, June-July, 2'-3'.
- 36. *Galium Molluge*, mist flower: half shade, June to late August, 1'-3'.
- 37. *Gypsophila paniculata*, infant's breath: July-August, 2'-3'.
- 25. Hardy chrysanthemums: Black Douglas, fringed petals, dark mahogany brown, medium early; Brown Bessie, small button, dark brownish maroon; Regal Beauty, deep wine red.
- 26. *Berberis Thunbergii*, Japanese barberry: planted for foliage and fruit effect of brilliant red.
- 38. *Boltonia asteroides*, aster-like boltonia: sun, late August to mid-October, 2'-8'.
- 39. *Anemone Japonica*, Japanese anemone: sun or half shade, late September to early November, 2'-2½'.
- 40. Hardy chrysanthemum, Queen of the Whites: large flowered, medium to late.

AUTUMN
RED

WHITE

As for the quality of the dominant color itself, there can, of course, be no mixture of orange, scarlet or crimson tones. What is desired is a real, true red, a glowing ruby or blood color.

If white is the peacemaker of the garden, yellow would seem to be the life of it. The deep golden tones, by their very intensity, seem to be in larger quantities than they really are. Accordingly, in the garden of various colors they contribute most to the general effect when they are used as accents.

At certain seasons, however, we do not object to an entire garden of vivid gold. In spring a garden of crocus, forsythia and daffodils forms a gorgeous though transitory picture; and in the autumn, when sombre tones predominate in the landscape, great masses of heleniums or chrysanthemums create an instant response in the beholder. In midsummer the eye wearies of hot, intense colors, and yellow should then be subordinated.

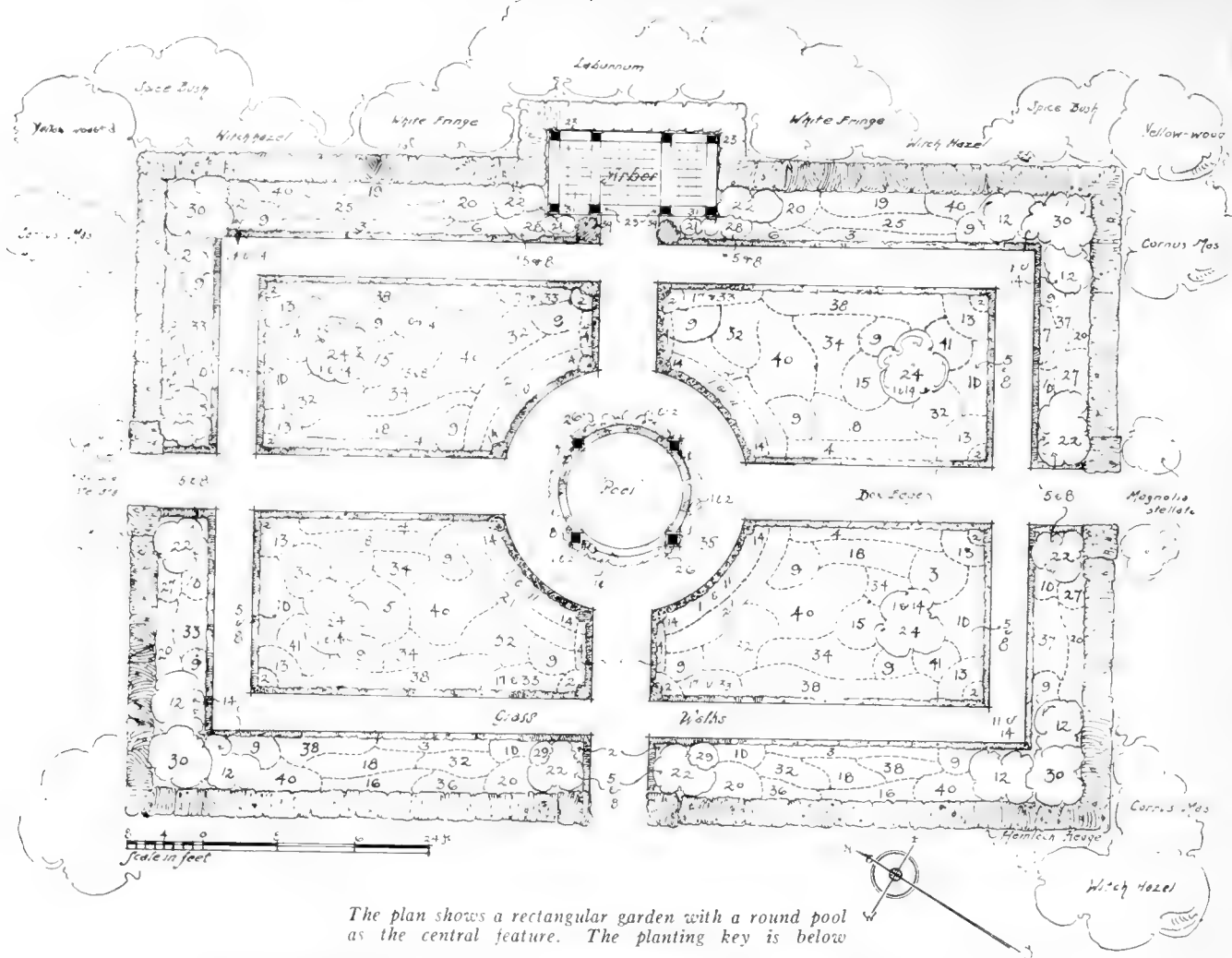
There is a type of yellow garden that could, consistently and agreeably, be carried out for the entire season. It is composed of pale primrose-yellow and cream-white, and is selected with the greatest care lest too strong a note obtrude on the softness of the general tone. To avoid weakness or insipidity there is added a dash of the darkest red imaginable—a velvety black maroon with no hint of crimson.

By its very nature the color scheme suggests great breadth of treatment in the arrangement of the flowers in large and effective masses. This effect is achieved by the comparative shortness of the list and the frank, simple design of the garden, which admirably lends itself to well-balanced masses of bloom. A cheerful warmth is its dominant characteristic; an effect accentuated by the dark brown garden house, the russet paths of tan bark or gravel, the rich green of the high encircling hemlock hedge and the dwarf box which frames the beds. Outside the hedge are masses of shrubs

whose effect is that of light and grace itself.

The year begins in February with Japanese witch-hazel; in March this is followed by sprays of spice bush, *Cornus mas* in April, and in late autumn by the native witch-hazel. All of these have delicate blossoms of light yellow, which in May become very striking with the aid of laburnum or golden chain. With a certain percentage of white—for instance, in April the *Magnolia stellata*, the fringe-like creamy yellow wood and the white fringe-tree in late spring—we evolve a contrasting background.

Inside the hedge certain shrubs and roses pay royal tribute. At the outer corners are strong masses of strawberry shrub whose cinnamon-scented brown flowers are an effective foil to the snowy white cascades of *Spiraea Van Houttei*. All the entrances are sentinelled with Harrison's yellow rose, an old-fashioned favorite, in early June a shower of fragrant semi-double blooms of sulphur yellow; while in front of them are some dark red varieties.



The plan shows a rectangular garden with a round pool as the central feature. The planting key is below

PLANTING LIST FOR A YELLOW AND MAROON GARDEN

EARLY SPRING—APRIL AND MAY

YELLOW—PERENNIALS

1. *Primula vulgaris*: English primrose; large solitary flowers of palest yellow.
- Primula veris superba*: giant yellow polyanthus; very large flowers in clusters, pale yellow, golden eye.
2. *Alyssum saxatile*, var. *Silver Queen*: Gold Dust, a very light yellow variety.

YELLOW—BULBS

3. Hyacinth, Yellow Hammer: creamy yellow.
- Hyacinth, Primrose Perfection: soft primrose yellow.
4. Narcissus, or daffodils

Leedsii: chalice and short-cupped varieties, white, cream or pale primrose (best ones are starred).

*Mrs. Langtry: pure white cup, perianth primrose.

Fairy Queen: perianth and cup pure white.

Katherine Spurrell: perianth white, cup soft yellow.

Ariadne: perianth ivory-white, cup amber-yellow.

Bridesmaid: perianth pure white, cup fluted, edged primrose.

*Duchess of Westminster: perianth pure white, cup soft canary yellow with darker edge.

White Trumpet: trumpet as long as perianth segments.

Lady Audrey: perianth milk white, cup primrose.

Grace Darling: twisted perianth of white, trumpet cream.

*Mrs. Thompson: perianth creamy white; trumpet yellow.

Madame de Graaf: perianth pure white, trumpet primrose.

5. Early tulips

Lord Derby: creamy white, large globular flower.

Princess Ida: white, striped creamy yellow, yellow base.

MAROON—PERENNIALS

6. *Chieranthus Chieri*: English wallflower; dark red, almost black.

7. *Trillium erectum*: three-leaved nightshade; very dark red.

MAROON—BULBS

8. Early tulips

Apollon: dull blood red, changing to claret, edged amber-brown; very large flower with green base.

SPRING—LATE MAY AND EARLY JUNE

YELLOW—PERENNIALS

9. *Iris Germanica*, var. *flavescens*: German iris, light straw color.

10. Peony, Delia: deep sulphur yellow with green spot, double.

YELLOW—BULBS

11. May-flowering tulips

Moonlight: soft but luminous canary-yellow, long, oval flowers.

Flava: creamy canary-yellow, large flower on stiff stem.

Miss Willmott: soft primrose-yellow, darker with age.

WHITE SHRUBS FOR CONTRAST

12. *Spiraea Van Houttei*: Van Houtte's spirea; drooping masses of pure white flowers. Excellent background for May-flowering tulips.

MAROON—PERENNIALS

13. Peony

Mrs. Key: single, dark blackish red, golden stamens.

Rubra triumphans: double, dark red, somewhat bluer in tone.

MAROON—BULBS

14. May-Flowering Tulips

André Doria: velvety reddish maroon, shading to blood-red.

King Harold: deep ox-blood red, purple-black base.

MIDSUMMER—JUNE AND EARLY JULY

YELLOW—PERENNIALS

15. *Yucca filamentosa*: Adam's Needle; tall, cream-white clusters, very striking.

16. *Spiraea filipendula flore pleno*: double flowered drooping, cream-white; tall, delicate clusters.

17. *Hemerocallis flava*: early lemon lily.

18. *Aquilegia chrysantha*: late-flowering lemon-yellow columbine.

19. *Digitalis grandiflora*: late foxglove pale yellow lined brown.

20. *Althaea rosea*: hollyhocks, frilled pale yellow and salmon tints.

YELLOW—SHRUBS AND ROSES

21. Polyantha rose: George Elgar; clear coppery yellow, blooming from June until frost.

22. Brier rose: Harrison's Yellow: double, sulphur-yellow, profuse fragrant flowers.

23. Climbing roses

Goldfinch: soft yellow, changing to lemon and white.

Gardenia: yellow, vigorous, Wichuraiana type.

Cytisus laburnum, var. *Adami*: golden chain, half standards, 2½-3' high, long pendent tassels of yellow.

MAROON—PERENNIALS

25. *Dianthus barbatus*: Sweet William, darkest red only.

26. *Papaver orientale*, var. Mahony: dark crimson maroon poppy, shaded mahogany.

27. *Althaea rosea*: hollyhocks, double maroon.

MAROON—SHRUBS, ROSES AND VINES

28. Hybrid Tea roses

Richmond: brilliant crimson-scarlet; well-shaped buds.

Gruss an Teplitz: scarlet, shading crimson.

29. Hybrid Perpetual rose: General Jacqueminot; scarlet-crimson.

30. *Calycanthus floridus*: Carolina allspice; chocolate-colored flowers with spicy odor. Medium size shrub.

31. *Akebia quinata*: good climber, delicate foliage; violet-brown flowers with cinnamon odor.

LATE SUMMER—JULY AND AUGUST

YELLOW—PERENNIALS

32. *Anthemis tinctoria* var. *alba*: chamomile, a variety paler than the type; creamy white with yellow center.

33. *Hemerocallis Thunbergii*: late lemon lily.

YELLOW—ANNUAL BULBS

34. Cactus dahlias

Countess of Lonsdale: salmon pink, amber and apricot.

Cockatoo: fawn yellow, suffused white.

35. Gladioli

Niagara: clear yellow, carmine throat.

Canary Bird: clear yellow.

Klondyke: clear yellow, crimson-maroon blotch in throat.

Fill in after bulbs with annuals, such as lemon snapdragon, cream color dwarf nasturtium Pearl, pale coffee color annual phlox, and canary stocks.

MAROON—PERENNIALS

36. *Monarda didyma*: Bee Balm; heads of deep red, from mid-June to early September.

MAROON—ANNUAL BULBS

37. Cactus dahlias

Phoenix: dark velvety crimson.

Uncle Tom: dark maroon, nearly black.

Fill in after bulbs with annuals, dark red dwarf nasturtium, King of Tom Thumbs, dark red snapdragon.

AUTUMN—SEPTEMBER TO NOVEMBER

YELLOW—PERENNIALS

38. Hardy chrysanthemums, September-flowering.

Ralph Curtis: creamy-white.

Wells Primrose: yellow.

Large flowered Ashbury: white suffused sulphur.

King Henry: straw white.

39. *Clematis paniculata*: Japanese Virgin's Bower; a perennial vine covered with mass of small white flowers in autumn.

MAROON—PERENNIALS

40. *Helenium autumnale*, var. Riverton Gem: yellow, changing to red.

Helenium autumnale, var. *Superbum rubrum*: color of the blood-red wallflower.

41. Hardy chrysanthemums

Brown Bessie: small bronze button.

Black Douglas: dark red, large loose flowers.

ROCK GARDENS AND THEIR ALLIES

Suggestions for Creating a Garden of Alpine Plants, with Those Variations of It, the Bog Garden and the Naturalistic Pool

TODAY the pleasure which is derived from the cultivation of small Alpine plants is fully recognized and enjoyed by the owner of the medium and small sized property. The rock garden—or Alpine garden, as it is sometimes called—has become a popular feature of modern landscaping and is no longer found only on large estates and public parks. It is a place of informal outline, closely akin to the wild garden, and is developed along naturalistic lines, aiming toward the picturesque in landscape design and avoiding straight lines and set arrangements.

There are two types of rock gardens: the natural and the artificial. In the first, the rocks have been placed by nature; and in the second they have been arranged



A remarkably successful development of the rock garden. The site is well chosen for its seclusion and freedom from cold winds. In the left center can be seen the entrance to a grotto. An abundance of plants gives the garden that sense of color and delicate growth so necessary to set off the rugged lines of the rocks and put them into their proper place in the general scheme. John Handrahan, landscape architect

by man. The old quarry, the rocky bank, and the rocky knoll and valley all lend themselves to the development of the natural rock garden. Suggestions for the construction and care of an artificial rock garden, as well as planting lists of reliable Alpine flowers, evergreens and ferns for the natural rock garden, are given on the following pages. From them a selection can be made for any situation.

The true rock garden should be treated as an isolated feature of a property. The site chosen for this type of garden, when circumstances permit, should be away from and out of sight of anything formal. No hard and fast rule for the choice of a site can be given, for it obviously depends upon what sites are available. While a

PLANT MATERIAL for the ROCKY BANK

Abronia latifolia (sand verbena): trailing, lemon yellow, blooms July.
Achillea tomentosa (wooly yarrow): 1', bright yellow, blooms July-October.
Adonis amurensis (pheasant's eye): 8", yellow, blooms March.
Adonis pyrenaica: 1', deep yellow, blooms May-July.
Adonis vernalis: 1', yellow, blooms April-May.
Aethionema coridifolium (aethionema): 6", rosy-pink, blooms June-July.
Aethionema grandiflorum: 12", rosy purple, blooms June.
Ajuga genevensis (bugle-weed): 8", bright blue, blooms May-June.
Ajuga reptans: 6", blue, blooms May-June.
Alyssum alpestre (madwort): 3", golden yellow, blooms May-July.
Alyssum montanum: 3", yellow, blooms June-July.
Alyssum saxatile compactum (rock madwort): 1', yellow, blooms April-May.
Androsace lanuginosa (rock jasmine): trailing, rose, blooms May-October.
Aquilegia alpina superba (columbine): 2', blue and white, blooms May-June.
Aquilegia canadensis: 2', red and yellow, blooms May-June.
Aquilegia chrysantha: 3', yellow, blooms June-August.
Aquilegia coerulea: 18", blue, blooms May-June.
Aquilegia flavellata: 1', pure white, blooms May-June.
Aquilegia nivea grandiflora: 2', white, blooms May-June.
Aquilegia Skinneri: 2', greenish yellow, blooms May-June.
Aquilegia vulgaris alba fl. pl.: 2'-3', white, blooms May-June.
Arabis alba (rock cress): 5"-9", pure white, blooms April-May.
Armeria alpina (thrift): 6"-10", pink, blooms May-June.
Armeria maritima: 6", pink, crimson, blooms May-June.
Asperula hexaphylla (woodruff): 6"-8", white, blooms May-June.

Asperula odorata (sweet woodruff): 6"-12", white, blooms May-June.
Aster alpinus (blue mountain aster): 5"-10", bright purple, blooms May-June.
Aubretia deltoidea (purple rock cress): 4"-6", dark violet, blooms April-May.
Aubretia purpurea: 4"-5", purple, blooms April-May.
Bellis perennis (English daisy): 5", white and pink, blooms May-June.
Bellis rotundiflora coerulea: 4", white, tinged lavender, blooms May-June.
Caltha palustris (marsh marigold): 1', golden yellow, blooms April-May.
Caltha palustris fl. pl.: 6", bright yellow, blooms April-May.
Campanula alpina (bell-flower): 6"-10", blue, July.
Campanula carpatia: 9"-18", blue, blooms June-July.
Cerastium alpinum (chickweed): 2"-4", white, blooms May-June.
Cerastium tomentosum (snow in summer): 6", silvery foliage, white flowers, blooms June.
Centaurea dealbata (bachelor's button): 18", deep pink, blooms July-August.
Chrysanthemum arcticum: 12"-18", white, blooms September-November.
Claytonia virginica (spring beauty): 6", light pink, blooms April-May.
Convallaria majalis (lily-of-the-valley): 6"-12", pure white, blooms May-June.
Crucianella stylosa (Crosswort): 6"-9", crimson, pink, pale rose, blooms June-September.
Delphinium chinense (larkspur): 12"-18", gentian blue, blooms June-September.
Dianthus barbatus (sweet william): 12"-18", red, white, rose, blooms June-July.
Dianthus deltoidea (maiden pink): 8"-9", pink, white, blooms June-July.
Dianthus neglectus: 8", bright rosy pink, blooms June-September.
Dianthus plumarius (grass pink): 1', various colors, blooms June-September.
Dicentra canadensis (squirrel corn): 6", white, blooms May.

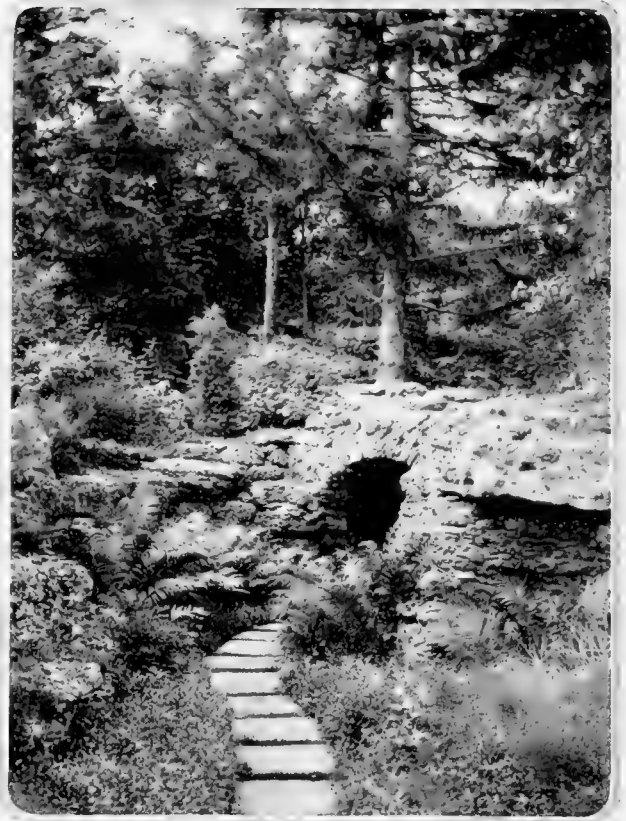
Dicentra spectabilis (bleeding heart): 1', pink, blooms May-June.
Dracocephalum Ruyschiana (dragon's head): 8"-12", purple, blooms June-July.
Doronicum excelsum (leopard's bane): 18"-2', bright yellow, blooms April-May.
Epimedium alpinum (barrenwort): 9", dark crimson, yellow, blooms May-June.
Epimedium violaceum: 9", violet, blooms May-June.
Euphorbia polychroma (milkwort): 2', chrome yellow, blooms April-May.
Gentiana acaulis (gentianella): 18", deep blue, blooms August-September.
Gentiana Andrewsii (bottle gentian): 18"-24", deep blue, blooms August-September.
Geranium sanguineum (crane's-bill): 1'-18", deep purple, blooms June.
Geranium sanguineum var. album: 18", white, blooms June.
Globularia trichosantha (globe daisy): 6"-8", blue, blooms May-June.
Gypsophylla repens (baby's breath): 4"-6", bluish white or pale pink, blooms June-July.
Helleborus niger (Christmas rose): 9"-15", white and purple, blooms March-April.
Hepatica triloba (common hepatica): 4"-6", white, lavender, pink, blooms April-May.
Heuchera sanguinea (coral bells): 18", bright crimson, blooms June-September.
Heuchera brizoides: 18"-2', purple, pink, blooms June-September.
Hypericum calycinum (Aaron's beard): 1', golden yellow, blooms August.
Hypericum Moserianum: 18", golden yellow, blooms June-September.
Iberis sempervirens (candytuft): 10", white, blooms April-May.
Iberis sempervirens var. Little Gem: 6", white, blooms April.
Incarvillea Delavayi (Delaway's incarvillea): 1'-2', purplish rose, May-July.
Incarvillea grandiflora: 1', bright rose color, blooms May-June.



Boulders and a tiny stream well combined. Notice how effectively the large elm tree focusses the whole effect. The foreground flowers are *Phlox subulata*

protected from the cold winds of winter. If it is possible, select a place with an approach through the wild garden or shrubbery. A stream should be brought through the garden if there is not already running water. A stream greatly increases the variety of plants that may be grown, affords unlimited possibilities, and adds much to the charm of the garden. An open situation, away from the roots of encroaching trees or tall shrubbery, should be selected, with sloping, undulating ground and preferably facing south or south-east. There should be no trees within fifteen yards of the garden, for their roots extract the plant food from the soil and the dripping from their branches is detrimental to most Alpine plants.

The proper building of the garden is of the utmost importance, and



Artificial rock-work must be handled with restraint to avoid grotesqueness. Quite fittingly, the entrance to this naturalistic grotto is flanked by tall ferns

rock garden can be made almost anywhere upon a property, a natural site often exists and needs only to be recognized.

The ideal situation involves the finding of a sequestered and sheltered part of an estate where sufficient but not too much sunshine can be obtained and in which the plants will be

should be done step by step. Remember that the object of a rock garden is to grow plants and not rocks. It is well to go to Nature and study some natural geological formation rather than try to build a second Stonehenge. Have a definite design from which to work. Aim at variety and balance in your plan and avoid

fussy effects. Place your stones so that the finished effect will reproduce in small rock gardens some portion of an Alpine scene, and in medium sized or large ones the scene in its entirety but on a small scale.

In placing the rocks remember that the object is to make the visible ones appear to be

Iris pumila (dwarf iris): 4"-8", deep violet, blooms May.
Iris pumila florida: 6", lemon yellow, blooms May.
Iris pumila formosa: 6"-8", light and dark violet, blooms May.
Linum flaxum (yellow flax): 1'-2', yellow, blooms June-July.
Linum perenne (perennial flax): 1', blue, blooms June-August.
Lychnis Haeageana (shaggy lychnis): 8"-12", red, blooms June-August.
Lythymia nummularia (moneywort): 1'-2", yellow, blooms June-July.
Mertensia virginica (mertensia): 18", blue, blooms May-June.
Myosotis palustris semperflorens (forget-me-not): 8", blue, blooms May-September.
Myosotis alpestris: 3"-8", blue, blooms May-September.
Nepeta glechoma (ground ivy): 3", blue, blooms May-June.
Oenothera missouriensis (Missouri evening primrose): 1'-2', yellow, blooms June-August.
Oenothera cespitosa (syn. *marginata*): 9", white, blooms August-September.
Oenothera fruticosa Youngii: 18", yellow, July-October.
Oenothera taraxacifolia (syn. *acaulis*): 6"-9", white changing to rose, blooms July-October.
Pachysandra terminalis (spurge): 6"-9", greenish white, blooms May-June.
Papaver alpinum (Alpine poppy): 6", white, blooms May-June.
Papaver nudicaule (Iceland poppy): 12", white, yellow, orange, red, blooms May-October.
Pentstemon digitalis (beard tongue): 4"-6", white, blooms April-May-June.
Phlox amoena (hairy phlox): 4"-6", bright rose, blooms May-June-July.
Phlox divaricata (wild sweet william): 12", lilac, blooms April-May.
Phlox divaricata alba: 4"-6", white, blooms May.
Phlox subulata (moss pink): 4"-6", various pink, blooms April-May-June.
Phlox subulata rosea: 3"-6", rose, blooms April-May.
Plumbago larpentae (leadwort): 6"-12", deep blue, blooms August-September.

Podophyllum peltatum (May apple): 6"-8", white, blooms April-May.
Polemonium reptans (Jacob's ladder): 6"-8", light blue, blooms April-May.
Polygonatum multiflorum (Solomon's seal): 6"-12", greenish white, blooms April-June.
Primula Sieboldii (primrose): 6"-12", white and various, blooms April-May.
Primula veris (cowslip): 6"-9", canary yellow, blooms April-May.
Pulmonaria angustifolia (blue cowslip): 6"-12", blue, blooms May.
Pulmonaria saccharata (lungwort): 1'-2", pink changing to blue, blooms May-June.
Ranunculus repens fl. pl. (creeping double buttercup): 6"-12", yellow, blooms May-August.
Sanguinaria canadensis (bloodroot): 6", white, blooms April-May.
Santolina incana (lavender cotton): 18", silvery white foliage.
Saxifraga crassifolia (saxifrage): 12"-15", pink, blooms April-May-June.
Saxifraga cordifolia: 12", lilac-purple, blooms April-May.
Sedum acre (stonecrop): 2"-3", yellow, blooms May-June.
Sedum spectabile (showy stonecrop): 18", lavender-pink, blooms September-October.
Sedum stoloniferum: 6", purplish pink, blooms July.
Silene alpestris (catch-fly): 4", white, blooms July-August.
Spiraea filipendula (dropwort): 15", white, blooms June-July.
Trillium erectum (wake-robin): 12"-18", purple, blooms April-May.
Trillium grandiflorum: 12"-18", white, April-May.
Trollius europaeus (globe flower): 18"-2', pale yellow, blooms May-August.
Tropaeolum polyphyllum (nasturtium): trailing, orange yellow, blooms June-July.
Veronica Allionii (speedwell): 6", blue, blooms May-June.
Veronica spicata: 1'-18", bright blue, June-July.
Vincia minor (periwinkle or myrtle): 6", evergreen.
Viola cornuta (tufted pansy): 5"-8", various, blooms April to frost.

PLANT MATERIAL FOR THE BOG GARDEN

Adonis amurensis (pheasant's eye): 9"-1', yellow, blooms March-May.
Adonis pyrenaica: 1', golden yellow, blooms May.
Adonis vernalis: 9"-1', deep yellow, May.
Andromeda floribunda (andromeda): 2'-3', white, blooms early May.
Andromeda polifolia: 1', pink, blooms May.
Anemone alpina (anemone): 6"-1', white, blooms May.
Arethusa bulbosa (arethusa): 8", rose-purple, blooms May.
Azalea amoena (azalea): 12"-15", rosy crimson, blooms May.
Azalea hinodegira: 12", brilliant red, blooms May-June.
Azalea procumbens: 2'-3', pink, blooms April-May.
Azalea rosaeiflora: 3', salmon, blooms April-May.
Azalea vaseyi: 3'-4', light pink, blooms early May.
Berberis empetrifolia (barberry): 18"-2', orange.
Boltonia latiquama var. *nana* (false chamomile): 2', pinkish lavender, blooms August-September.
Calceolaria plantaginea (calceolaria): 12", yellow, June-August.
Caltha palustris (marsh marigold): 1', yellow, blooms April-May.
Caltha monstrosa fl. pl.: 12", white, blooms April-May.
Caltha parnassifolia: 12", yellow, blooms April-May.
Campanula hederacea (bellflower): 3", bluish purple, blooms May-June.
Convallaria majalis (lily-of-the-valley): 8", white, blooms May-June.
Cypripedium spectabile (lady's slipper): 8", white, blooms May.
Daphne blagayana: 12", creamy white, blooms April-May.
Daphne cneorum (garland flower): 12", rose, blooms May-June.
Daphne Genkwa: 3', lilac, blooms May-June.
Daphne mezereum: 18", pink, blooms March.
Dicentra canadensis: 6", white, blooms May.
Dodecatheon integrifolia (shooting star): 4"-6", rosy crimson, blooms May-June.
Dodecatheon Jeffreyi: 18", dark rose, blooms May-June.

only a small part of what is hidden by the soil. Place the additional rocks so that the strata all run in the same direction, putting the largest rocks and boulders at the bottom and burying them one-third in the ground. The size of the stones used should depend upon the size of your garden. Build the rocks and soil carefully together, eliminating air spaces between the rocks. The stones should be placed in such a manner that the water will drain into the soil rather than run off. Finally, remember to leave plenty of pockets for the soil and plants between the rocks.

It is advisable to use rocks that will give an old, weather-beaten appearance, such as moss-grown stones; but it is of the utmost importance to avoid anything which will crumble with exposure. Artificial rocks, bricks, old tree stumps or wood of any kind should never be used. Sandstone and mountain limestone are good to use because they are soft and porous and of a moisture-retaining character.

Alpine plants, contrary to a quite widespread belief that they will grow in almost any



To one standing near the rock house shown in the photograph on page 31, this view is presented. Lombardy and Bolles poplars mark the skyline above the golden elders which form a background for the smaller plants

kind of earth, require a good rich soil. Porous soil mixed with leaf mold and well rotted manure, used to a depth of 2' or 3' with a light, sandy subsoil, will give the best results. Avoid a heavy clay soil. The garden must be constantly watched in summer and the ground kept from drying out. An annual top-dressing of soil every spring will prove beneficial to all the plants.

Good drainage is essential to the success of this type of garden. The correct placing of the rocks and the presence of a tiny stream are great aids to proper drainage but are not sufficient in all cases. For dry stone wall gardens it is sometimes necessary to install a sub-irrigation system consisting of a perforated wrought iron pipe placed along the top and rear of the wall. In most cases it is not necessary, however, to irrigate if care is taken in the location and building of the garden.

The planting calls for care and a fine sense of fitness. One's aim should be to have the garden present the best possible appearance throughout the year; this can be accomplished by providing for a continuity of bloom. By using the early spring flowering bulbs such as snowdrops, scillas, crocuses, grape hyacinths, chionodoxa, colchicum and poet's narcissus for early spring bloom, the Alpines and small, compact growing shrubs for spring and summer, and dwarf evergreens for winter when the flowering plants have died down, a pleasing year-round effect results which offers abundant variety.

Gentiana asclepiadea (gentian): 2', blue, blooms July.
Gentiana bavarica: 1', blue, blooms July.
Gentiana Favratii: 1'-2', deep blue, blooms July.
Gentiana Kurroo: 1'-18", blue, blooms September.
Gentiana pneumonanthe: 6"-8", deep blue, blooms August.
Gentiana verna: 1', blue, blooms May-June.
Iris cristata (iris): 6", azure blue and lilac, blooms April-May.
Iris sibirica: 1', lilac, blooms April-May.
Linnaea borealis: 8"-12", pale pink, blooms June.
Lobelia cardinalis (cardinal flower): 2'-3', red, blooms August-September.
Lobelia syphilitica: 2'-3', blue, blooms August-Sept.
Muscari botryoides (grape hyacinth): 6", blue, blooms March-April.
Oenothera Arendsii (evening primrose): 1'-18", pink, blooms May.
Oenothera cespitosa: 12", white changing to rose, blooms May.
Oenothera fruticosa: 18", yellow, blooms May.
Oenothera speciosa: 18", white changing to pink, blooms May.
Orchis foliosa (Madeira orchid): 18", rosy purple, blooms May.
Orchis latifolia: 12", purple, blooms June.
Orchis maculata var. *superba*: 18"-2', lilac spotted purple, blooms June.
Primula Bulleyana: 1', orange scarlet, blooms June.
Primula involucreata: 6", creamy white, blooms April-July.
Primula japonica: 1', deep crimson to pure white, blooms May.
Primula pulverulenta: 1', crimson, blooms April-May.
Primula rosea: 6", rosy carmine, blooms April.
Primula sikkimensis: 1', yellow, blooms May.
Ranunculus aconitifolius (crowfoot): 2', white, blooms May.
Ranunculus alpestris: 4"-6", white, blooms June-July.
Ranunculus parnassifolius: 6", white, blooms June.
Sanguinaria canadensis: 6", white, blooms April-May.
Saxifraga cespitosa: 1', red, blooms April-May.
Saxifraga sanguinea superba: 4", scarlet, blooms May-July.
Saxifraga exarata: 4", white, blooms June.
Saxifraga globulifera: 4", white, blooms May-June.

Trillium erectum: 1', purple, blooms May.
Trillium grandiflorum: 1', white, blooms May.

PLANT MATERIALS FOR POOLS AND PONDS

(* Plants suitable for 1' or less of water, or on banks)

Butomus umbellatus (flowering rush): 2'-3', rose, blooms summer.
**Caltha palustris* (marsh marigold): 1'-2', bright yellow, blooms April-June.
Carex (sedge): 1'-3'.
Epilobium hirsutum (willow-herb): 2'-4', purplish.
Hippuris vulgaris (horse-tail): 2'.
Hottonia palustris (feather-foil): light purple, blooms summer.
**Iris laevigata* (Japanese iris): 2'-3', various, except red, blooms June, July.
**Iris pseudo-acorus*: 2'-3', yellow, blooms June.
Iris versicolor (native blue flag): 2'-3', purple marked with yellow, blooms June.
**Iris sibirica*: 2'-3', lavender, blooms June.
**Lysimachia thyrsiflora* (loose-strife): 4"-6", yellow.
Myosotis palustris (forget-me-not): blue, blooms June.
Nuphar luteum (European yellow pond lily): blooms June.
Nymphaea advena (yellow water lily): yellow, blooms June to August.
**Nymphaea alba* var. *candidissima* (white water lily): white, blooms June to August.
**Nymphaea Marliacca* (Marliac's hybrids): white, blooms June to August.
Nymphaea odorata (native white pond lily): white, blooms June to August.
Nymphaea odorata var. *rosea* (Cape Cod water lily): pink, blooms June to August.
Polygonum amphibium: spreading, light rose.
Pontederia cordata (pickerel weed): 2'-4', purple, blooms June to August.
Ranunculus aquatilis var. *lingua major*.
Sagittaria latifolia (arrowhead): 6"-4', clear white.
**Typha latifolia* (cat-tail rush): 4'-8", brown, July to August.

PLANT MATERIAL FOR THE DRY WALL

(Those which thrive best when planted flat against

a perpendicular rock face are marked (*). The color, height and period of bloom of these plants may be found under the list of material for the rocky bank.)

**Androsace alpina*.
**Androsace pyrenaica*.
Arabis albidia.
Ajuga reptans.
**Armeria cespitosa*.
Aubretias of all kinds.
**Campanula Elantines*.
**Campanula fragilis*.
Campanula rotundifolia.
Cheiranthus alpinus.
Aquilegias of all kinds.
Dianthus arvensis.
**Dianthus suavis*.
**Gentiana acaulis*.
Primula marginata.
Primula viscosa.
Saponaria cespitosa.
Saxifragas.
Sedum acre.
Silene alpestris.

PLANT MATERIAL FOR CREVICES BETWEEN WALKS AND STONY STEPS

Ajuga reptans (bugle weed).
Alyssum saxatile compactum (silver madwort).
Aquilegias (columbine).
Arabis albidia (rock cress).
Campanula cespitosa (bellflower).
Campanula rotundifolia (harebell).
Cerastium tomentosum (snow-in-summit).
Cheiranthus alpinus (wallflower).
Gentiana acaulis (gentianella).
Geranium maculatum (crane's bill).
Gypsophila repens (baby's breath).
Phlox subulata (moss pink).
Portulaca grandiflora (rose moss).
Sanguinaria canadensis (bloodroot).
Saponaria ocymoides (soapwort).
Sedum acre (wall pepper).
Tunica saxifraga (saxifrage).
Veronica rupestris (speedwell).

THE SPIRIT of OLD-FASHIONED GARDENS

*With a Plan for a Garden Reproducing the
Atmosphere of the Puritans*

AN old-fashioned garden—how the picture flashes across the mind! Lilac, laburnum, snowballs and syringas arching over the gate and crowding the white pickets of the fence. A sundial and arbor of delicate Colonial pattern; neatly raked gravel paths skirting the box-edged beds wherein graciously nod the flowers our grandmothers loved—hollyhocks, honesty, roses and heart's-ease.

Many such gardens can still be seen, and the old ladies are always smilingly glad to entertain you. They will point out their treasures with particular pride—the old fig tree, the mulberries, and the grapes—and in the arbor before you leave, serve you tea in the blue Crown set.

How can such a garden be reproduced? Was not its evanescent charm too subtle to be expressed in terms of beds and walks, shrubs and flowers? What was its secret?

The old gardens were successful because they filled an actual need in the lives of the people. To appreciate this it is necessary to know how those people lived, and to study their ideals. A modern reproduction of an old-fashioned garden must fill a like requirement in the lives of people today or it cannot be a success, no matter how truly it imitates the old. People are not now so dependent on their gardens for the necessities of life. The raising of fruits and vegetables for practical use, while not wholly discontinued, in normal times has become subordinate to the growing of flowers for cutting and out-of-door decorative effect. Standards, too, have changed. We are no longer satisfied with the ungentle mixtures of color which the old gardens displayed.

There are distinct kinds of old gardens in each section of the country. In the extreme South is the Spanish type, a walled enclosure of simple though formal design, with roses, heliotrope and carnations, oranges and lemons, figs and pomegranates.

In the Carolinas we associate the walled enclosures about the stately old mansions with live oaks draped in gray moss, azaleas, camellias, and crêpe myrtles.

In Virginia, as with all



In the old-fashioned garden flowers straggled informally over the walks, their background of tall shrubs lending an air of length and seclusion. These gardens, the plan and the text are the work of Elizabeth Leonard Strang, landscape architect

of the Colonies, the earliest gardens were for necessities alone, but soon the luxurious ideas of the Cavaliers began to assert themselves and flowers occupied a definite place in the decorative scheme. Living as they did on large plantations, there were no homely enclosures or cottage gardens. The settlers brought ideas from Holland, acquired during their exile in that country; from Italy, and from England, where the Elizabethan garden was then at the height of its perfection and popularity.

planted with flowers, vegetables, herbs and fruits, cabbages and tulips occupying especially prominent places among them.

The Puritan nature is found expressed in the gardens of New England, and such designs as they followed were adaptations from the Dutch, though more often the little fenced-in front yards held only simple square beds. The first mention we find of gardens for flowers was in 1629, but from the very beginning there was the useful plot at the back, where lowly back-door flowers, vegetables, fruits and simples shared in contributing necessities and comforts to their caretakers.

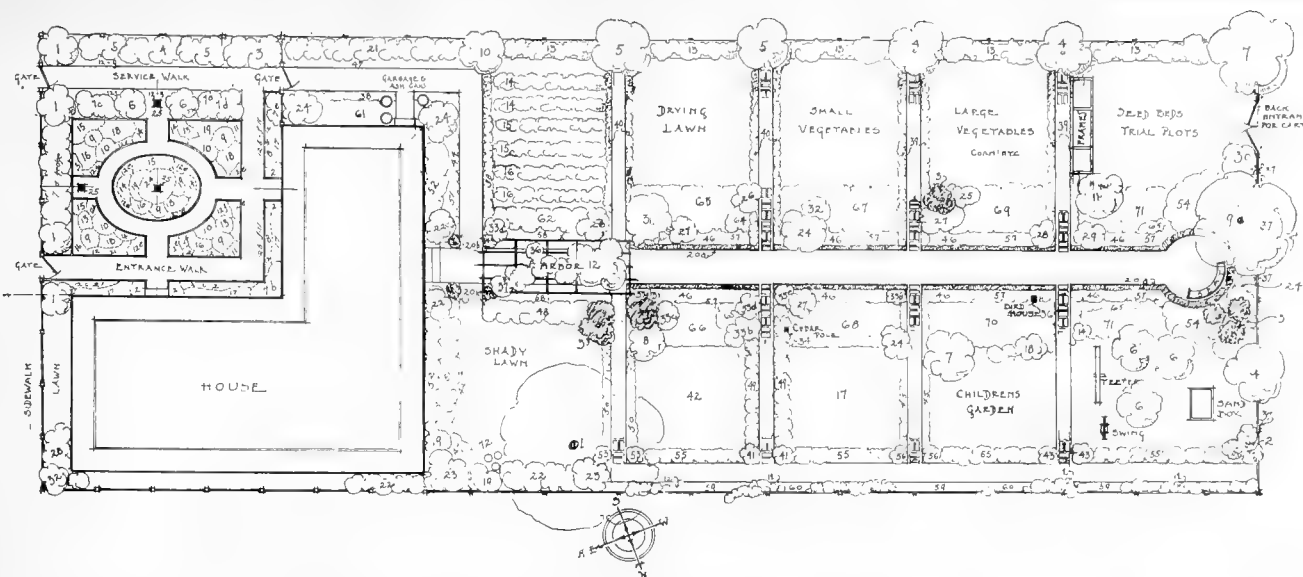
No formula can be laid down for making an old-fashioned garden. Every type of house, be it Spanish, Georgian Colonial, Pennsylvania stone, Long Island Dutch, or New England square, has its special problem, in the solution of which climate as well as architecture plays an important part that we must not overlook.

In Puritan times, to grow flowers for their beauty alone was held to be, if not a sin, at least a vanity. Nevertheless the busy housewife found moments in which to care for the little fenced-in plot before the house.

The authoritative list is short: crown imperials, daffodils, red and yellow tulips, poet's narcissus and



The Cavalier type, which was found in the Virginias, had a strongly formal spirit. It often included a parterre. The simplicity of the design and the neatness suggest the old Elizabethan gardens, their general source of inspiration



grape hyacinths, red peonies, purple and yellow iris, magenta phlox, Canterbury bells, scarlet lychnis or Maltese cross, and day lilies of blue and white comprise the list. Surrounding the flowers were always a few old shrubs—flowering almond in the place of honor under the window, and Peter's wreath, sweet shrub, flowering currant, snowberry and a few choice roses near by.

Such a mixture would hardly appeal to our ideals of beauty today, so many flowers of harmonious color and sentiment have been included in the plan for the front yard garden,

The Puritan garden and its planting plan given on this page represent the spirit of an age which demanded utility as well as an intimate touch of beauty

which is small enough to be taken care of by the housewife of today.

The tall flowers are grouped promiscuously in the centers of the beds with some attempt at balance of season, while mixed edgings of tiny plants, bulbs and fragrant herbs creep over the brick-edged paths. Oleanders in tubs provide a note of architectural dignity, hollyhocks stand in serried ranks against the house,

hawthorns and sweetbriar shut off the street, and round about are other old shrubs and roses.

In the rear of this garden is a typical plot laid out as these orderly householders loved to have it. The general plan is informal in the extreme and at first glance seems irregular and disorderly. It was really very carefully planned, however. The beds were not laid out in shapes for their own sakes, but there is careful design in the sense that the garden as a whole served a useful purpose and each plant was placed in the location most favorable to its growth.

PLANTING LIST FOR THE FENCED-IN FRONT YARD

Note: Only the part of Plan 2 between lines A-A is included here.

SHRUBS AND VINES

1. *Grænegras oxyacantha*: English hawthorn, fragrant white flowers in May, red fruits.
2. *Prunus japonica*, *flor. pleno*: double pink or white flowering almond, May.
3. *Syringa vulgaris*: common purple lilac, May.
4. *Philadelphus coronarius*: Mock orange, white, June.
5. *Symphoricarpos racemosa*: snowberry; white fruits, always found.
6. *Spiræa prunifolia*: Peter's wreath; white, upright bush, May.
7. Old-fashioned roses
 - A. *Rosa rubiginosa*: eglantine or sweet-briar, single pink flowers, tall thorny bush.
 - B. *Celestia* rose: clear white, very sweet, loosely double.
 - C. *Perpetua* rose: delicate blush, blooms continuously, upright bush.
 - D. *Tuscany* rose: black-purple, fading to dark crimson.
 - E. *White Provence* or cabbage rose.

PERENNIALS AND ANNUALS

8. *Chieranthus Chieri*: wallflower, dark red, cream color, yellow and brown. May.
9. Peonies, pink and white as in list 2.
10. Iris as in lists 1 and 2.
11. *Armeria maritima*: thrift or sea gillflower; pink, May. Dense foliage, useful for edgings.
12. Various small plants for edgings to be put two or three of a kind.
 - A. English daisy.
 - B. Pansies.
 - C. Johnny-Jump-Up.
 - D. Annual candytuft seeded where space occurs.
 - E. Scotch pinks, all around center bed and on corners.
 - F. Sweet violets.
 - G. Lily-of-the-valley. In shade under shrubs.
 - H. *Rosmarinus officinalis*: rosemary.
 - I. *Thymus vulgaris*: creeping thyme.
 - J. *Ruta graveolens*: rue.
 - K. *Lavandula vera*: sweet lavender. These herbs to be put in hit or miss with flowers.
13. *Valerian officinalis*: garden heliotrope; pink, June.
14. *Dianthus barbatus*: Sweet William; newer strains of pure white, dark red or pink are best.
15. *Digitalis purpurea*: foxglove; white, purple, pink, June.
16. *Digitalis ambigua*: great woolly foxglove; brown markings, June-July.
17. *Digitalis lanata*: woolly foxglove, small cream, grayish or purple flowers, June-July.
18. *Campanula persicifolia*: bell-flowers; white and blue, June.
19. *Campanula pyramidalis*: chimney bell-flower; white and blue, July-August.
20. *Althæa rosea*: hollyhock; single yellow, salmon and pink; massed against house; July.
21. *Delphinium acaule*: annual larkspur; blue, pink, white, all summer.
22. *Delphinium Chitensis*: blue foliage, very deep blue flowers, July.
23. *Delphinium sulphureum*: light yellow, half-shade.
24. *Aconitum Napellus* as in lists 1 and 2.
25. *Aconitum Lycoctonum*: pale yellow wolf's bane or monkshood, July to September.
26. *Mathiola incana*: dwarf Virginia stocks; (annual) fill in where space occurs around edges.
27. *Tagetes patula*: French marigolds; (annual) fill where space occurs.

BULBS

21. Small bulbs used for edgings where room can be found.
 - A. Snowdrops, March and April.
 - B. *Crocus susianus*: cloth-of-gold crocus, striped brown, March.
 - C. Jonquils, bright yellow, fragrant, May.
 - D. Grape hyacinths; blue and white.
 - E. *Scilla festalis* (nutans): Bluebell of England; drooping, bell-shaped; lavender, white or pink; tall stems; May-June.
 - F. *Scilla autumnalis*: autumn-squill, small starry rose flowers in clusters. July to Oct.
22. *Narcissus van Sion*, double daffodil, May.
23. *Narcissus Pseudo-narcissus*: trumpet daffodils, May. 23. Tulips as on other lists.
24. *Lilium candidum*: madonna lily; white, late June or July. 25. Oleanders in tubs.

PLANTING LIST FOR THE PURITAN GARDEN

List No. 5

On Plan 2. All except between lines A-A

TREES

1. Elm, to overhang shady lawn back of house.
2. Lombardy poplars, accents at far corner of lot.
3. Arborvitæ, for winter color and contrast with fruit blossoms.

FRUITS

4. Peach.
5. Plum; both placed where larger trees would shade beds too much.
6. Pear, tall when old, where children can climb them.
7. Cherry, near walk to grow tall and close in vista.
8. Apricot; planted for flowers, for it may not fruit in cold climate.
9. Apple, to overhang seat.
10. Quince, bush cuts off view of garden from service portion.
11. White mulberry, near birdhouse.
12. Grapes: Salem and Catawba, red; Concord, blue; Niagara, white.
13. Blackberries; shady side of fence, as they stand some shade.
14. Raspberries.
15. Gooseberries.
16. Currants; berry plot screens service entrance from garden.
17. Strawberries.
18. *Corylus Americana*: hazel-nut, near children's plot.

SHRUBS AND ROSES

19. *Azalea Vaseyi*: soft pink, April, shade.
20. Box: (a) large, irregular specimens as accents on corners, and (b) old ragged dwarf edging box down center walk, collected from old place if possible.
21. *Berberis vulgaris*: common barberry or pepperidge; for jelly, near kitchen.
22. *Syringa* or mock orange, shade.
23. *Lonicera Morrowi*: bush honeysuckle, pink flowers, May, red fruit.
24. *Lonicera fragrantissima*: very fragrant white flowers in April.
25. Persian lilac, medium to tall.
26. Flowering quince, common flaming red variety most old-fashioned.
27. Flowering almond, double pink and white, short to medium.
28. Flowering currant, center walk and front fence, medium to tall.
29. Snowball, medium to tall.
30. Cornelian cherry, along back fence in shade. For early flower.
31. Smoke tree, closes in end of arbor.
32. *Tamarix Gallica*: tamarisk; small tree, feathery green with pink flowers.
33. Roses as in other lists.
 - A. Damask.
 - B. Cinnamon.
 - C. Provence, red and white.
 - D. Scotch briar. E. Moss, red, white, pink.

VINES

34. *Wistaria Chinensis*: purple wistaria, trained to rustic cedar pole.
35. *Akebia quinata*: five-fingered akebia; delicately twining vine, fine leaves and fragrant chocolate flowers. Not on lists but seen in old Salem gardens.
36. *Hululus lupulus*: hop vine; (annual) good for immediate effect.
37. *Lonicera sempervirens*: coral honeysuckle; not on oldest lists but unlike old ones, purchaseable. Long scarlet flowers and thick glaucous leaves united at the base.

HERBS

38. *Mentha piperita*: peppermint; needs a boxed in bed or it spreads.
39. *Artemisia dracunculoides*: tarragon; useful for flavoring vinegar.
40. *Allium Schœnoprassum*: chives; for salads and soups.
41. *Saivia officinalis*: sage; for meats and dressing.
42. *Thymus vulgaris*: creeping thyme; for flavoring.
43. *Lavandula vera*: sweet lavender, for linens, not hardy north.
44. *Lippia citradora*: lemon verbena, for scenting linens; not hardy.
45. *Nepeta cataris*: catnip or catmint; soothing drink, cats fond of it.

VEGETABLES

39. Cabbage used as a border in old gardens.
40. Parsley used to edge vegetable beds, as it also is today.
41. Rhubarb, an ornamental accent as well as useful vegetable.
42. Asparagus, placed where the feathery plumes will frame the lawn.

PERENNIALS

43. Bleeding-heart at corners of cross-walk.
44. Wild flowers in shade among ferns next lawn. *Viola Canadensis* and *pubescens*, tall white and yellow violets; foam flower, wild Sweet William, May-apple, Jack-in-the-pulpit, hepatica, spring beauty (*Claytonia*), trillium, etc.
45. Pinks, as edge of one of the small walks.
46. Primulas, large yellow, in masses down entire length of center walk.
47. Lily-of-the-valley, in shade in front of shrubs.
48. Peonies, shady side of arbor next the lawn.
49. Iris as in other lists; also Queen Emma, pale gray with gold spot.
50. *Funkia lancifolia*: blue day lily; July to September; shady border.
51. Ferns next house in shade. Maidenhair, hay-scented, cinnamon and ostrich are the best.
52. Foxgloves back of ferns.
53. Lemon lilies, accent in shade.
54. Hollyhocks, bold masses at end of center walk, to frame seat.
55. Phlox as in other lists; also Pink Beauty, Elizabeth Campbell, Selma, Rynstrom.
56. Larkspur, as accent at end of cross-walk.

BULBS

57. Late tulips, not literally the old-fashioned varieties but the best sort of color: Clara Butt, Madame Krelage, Edmee, pink.
58. Moonlight, Primrose Beauty, Retroflexa, yellow.
59. Dream, Crepuscule, Rev. Ewbank, lavender.
60. Faust, La Tulipe Noire, dark maroon, etc., etc.
61. Poet's narcissus, in shade bordering walk under arbor.
62. Narcissus, large yellow trumpet, in front of grapes.
63. Lilies as in other lists in front of grapes.

ANNUALS

61. Orange marigolds, appropriate in bed near kitchen door.
62. Cosmos, tall mass of feathery green to close in arbor.
63. Shell pink annual asters; not on old lists but must be had for cutting.
64. Love-in-a-Mist, delicate blue, with the pink asters. Seed in.
65. Bachelor's buttons, called corn-flower or blue bonnets, with the poppies.
66. Poppies, large double fringed white and pink. Also Shirley varieties; thin to 8".
67. Annual larkspur, sky blue.
68. Rose pink zinnias, pull up all other colors. Not on oldest lists.
69. Snapdragon, lemon color.
70. Stocks; soft pink, lavender dark reddish purple, canary color.
71. Calendulas, pale sulphur yellow.

POTS

72. Fuchsias, rose geranium, small pink fairy lilies (*Zephyranthes rosea*). Agapanthus lily, (blue), oleanders, azaleas, etc. Standing in pots on edge of lawn.



A GLACIAL GORGE ROCK GARDEN

Thirteen months before this photograph was taken the spot was a glacial morain—a bare field with many fine boulders scattered about. With a nice discernment for the natural beauty of rocks and water, the designer laid out this lily pond at one end and built up a cave of the winds where the breezes blow dancing wraiths of myriad colored misty spray. Rock plants are tucked away between boulders. From this pool the channel leads to two others, accorded a similar treatment. The garden is on the estate of George P. Mellick, Esq., at Plainfield, N. J. The landscape architect was C. W. Mareddydd Harrison



Clipped barberry is used in the garden above to outline the formal grass walks, while arborvitae, sheared to perpendicular sides and flat top, forms an enclosing wall. Mary Rutherford Jay, landscape architect



The round plan, applied to a smaller garden, proves the adaptability of the circle in garden design. Here the paths are accented by being of gravel, and the entrances are marked by rose arches. Paul R. Allen, architect

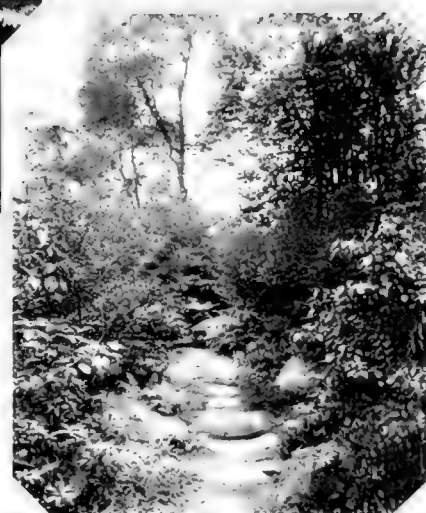
THE CIRCLE IN GARDEN LAYOUT AS APPLIED TO TWO FORMAL DESIGNS

Covering an acre and a half in the heart of Cleveland, Ohio, is the garden of Francis A. Drury. Everything was brought there—trees, rocks, and the hills and slopes made. City water is used for the pools



A NATURAL GARDEN IN THE HEART OF A CITY

VITALE, BRINCKERHOFF
& GEIFFERT, *Landscape Architects*



It is difficult to imagine that these secluded steps have not been there since the beginning of time. The garden is an accomplishment in the new school of landscaping the naturalists.



Aptly enough this garden is called "The Oasis". The planting is so arranged that the surrounding city is completely hidden and its noises lost in the transplanted woodland growth.

Flowers are planted around the pools, giving an enrichment of color. Many of the shrubs are also flowering types and the garden lacks no natural interest of varied blossoms.

THE GARDEN POSSIBILITIES of a CITY BACK YARD

Exploding the Theory that Pleasant Vistas and a Wealth of Bloom Are Restricted to the Broader Areas of Country Gardens—A Definite Planting Plan

THE city back yard is by no means the hopeless, dreary horticultural desert that one is led by pessimistic forecasts to believe. Whatever hopelessness enshrouds it is usually evolved from the attitude of mind of the owner or occupant of the particular back yard under consideration. If one takes the stand that the position is untenable and that nothing can be done, the probability is that nothing will be done; but if on the contrary there is a determined effort to "start something" then something is going to happen, and that something will doubtless bear results.

A city back yard is just so much land, just as an equal piece of land elsewhere is but a piece of land. The thing to do is to go to work and see what can be done with it. To be sure, the land is apt to be hard from lack of tilling, and is probably lacking in fertility; but both these objections can be overcome by thorough digging in the one case and the application of fertilizers—preferably well rotted barnyard manure—in the other.

Just what is to be undertaken in reclaiming a neglected back yard will depend entirely upon the tenure of occupancy. If the residence is a permanent home, then the yard may be laid out into walks, a bit of lawn, flower borders and shrubbery; for even a two-by-four-rod lot will afford room for a generous planting and such garden accessories as one may desire. But if the home is merely temporary, then not much

in the way of permanent improvements will be undertaken; yet the yard may be made charming by the use of bedding plants, annual flowers and vines sensibly arranged.

The first thing to undertake will be a thorough cleaning up of the ground, removing everything that is not actually necessary and making the ground as smooth and presentable as possible. The next thing in order will be hiding the division fences and any outbuildings that exist with vines or tall growing annuals. Narrow beds dug along the fences on either side may be planted with vines of quick growth, and such summer bedding plants and tall annuals as cannas, cosmos, ricinus, and the like may be used to mask the rear fence. These are all plants which may be started in the house from roots and seeds and planted out when the weather is suitable.

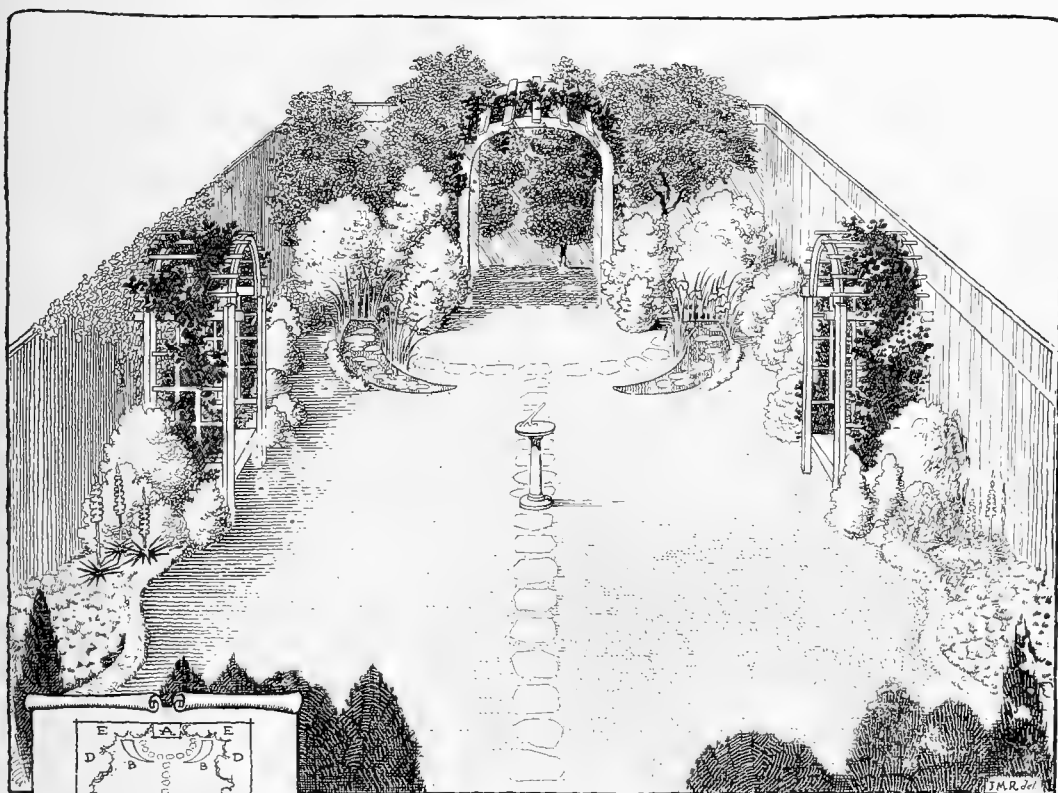
Usually it is preferable to leave the center of the lot open, seeding down the ground to grass for a bit of lawn; but this is hardly practicable in the temporary home. As a bare expanse of earth is anything but attractive, it will be better to put this part of the lot into flower beds, using low growing annuals or bedding plants and leaving broad walks around this miniature garden. This with the border beneath the fences will cover the lot so that only the paths remain, and if these can be covered with sand or gravel or even sifted coal ashes the result will be entirely satisfactory.

An even better arrangement than the vines growing up the fences would be the erection of boxes on top of the fences filled with trailing vines, such as nasturtiums or other gay-flowering vines. The boxes may contain upright plants as well—just the sort of planting that one makes in porch or window boxes, only on a somewhat larger scale. The expense for this sort of work need not be great, as rough wooden boxes will answer quite as well as more costly ones. The long boxes in which curtain poles are sometimes shipped are just the right thing and can be purchased for about twenty-five cents each at the dry goods or furniture stores. They need only filling with good soil to be ready for the reception of such plants as one may elect to use. If the fence has a flat board on top, the boxes may be set directly on it, but if no top rail is present the boxes are easily adjusted by means of wooden brackets attached to the fence posts.

Where the boxes are adopted instead of planting vines at the foot of the fence, then scarlet salvia, white feverfew, camphor geraniums, nicotiana, asters, stocks and the like may lift their bright heads from the ground to meet the down trailing vines. Petunias, verbenas, sweet alyssum and ageratum may be used as an edging, and the whole will furnish a wealth of bloom from early summer to frost.

Taller growing annuals may be banked about the base of the house and the rear entrance steps. Erect a trellis of wire above the entrance and cover this with Japanese morning glories, *Cobaea scandens*, passion vines and similar free blooming vines. On top of the balustrade and in all the rear windows place boxes of bright flowers. If a continuous succession of boxes along the entire fence seems too great an undertaking, they may be separated by a few feet and the spaces between filled with some not too rank growing vine planted beneath the fence; or a tall growing plant may be utilized to fill the opening and relieve the monotony of a too level planting beneath. Then if one is faithful with the watering hose, zealous in training the growth of vines and plants, and will gather flowers before they fade and keep the plants free from insect pests, there will be no call to despise the city back yard.

The permanent back yard, however, should have as its chief charm a stretch of velvety green sod, well trimmed and shaved, and the flowers should be merely the framework and adornment of its beauty. A broad cement or graveled path, or one with stepping stones down its center, broadening midway of its length into a circle enclosing an artificial pool for lilies and goldfish and with garden seats at each side, may be the chief feature of this part of the yard. Mass planting of tall growing perennials and shrubs may serve as a screen for an enclosing fence or undesirable view. Taller shrubs and ornamental trees may close the vista in the rear, and a little tea house or pergola makes a shady retreat at the end of the path. Stepping stones give a quaint and old-time flavor to a garden, but they must be set low enough to allow the lawn mower to pass freely over them. Walks of red brick, especially where the enclosing walls are of brick, are charming. Seats of red cement may be used with them, or wooden ones painted green.



(A) Summerhouse or pergola; (B) lily or lotus pool; (C) seats with lattice backs and hoods; (D) tall shrubs; (E) ornamental trees; (F) low shrubs or tall perennials; (G) vines; (H) low perennials, annuals or bedding plants; (K) sun dial; (M) stepping stones

PLAN

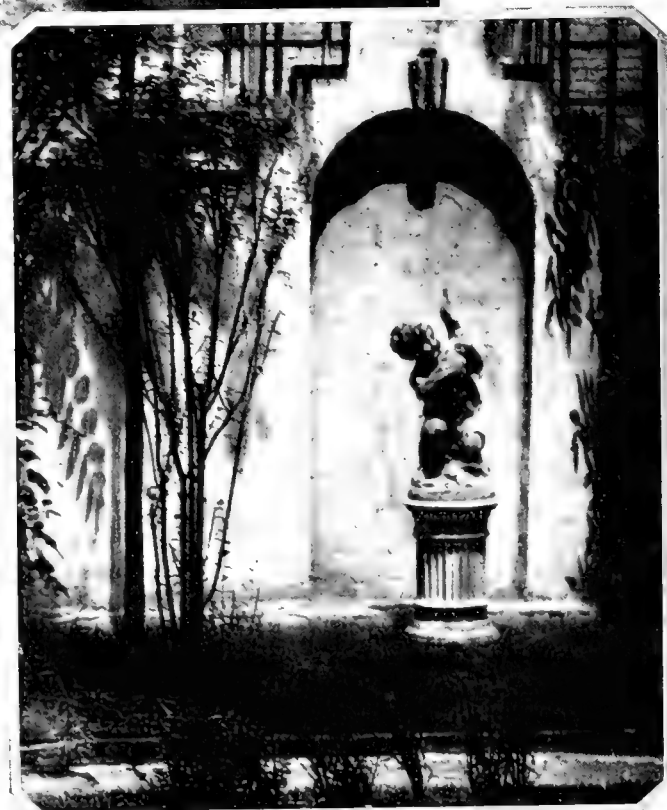
The garden is made of a space about 8' wide is paved and covered with trellis, forming a shady cat. Wisteria and wild grape climb the trellis and ivy is in the window box. Opposite is a wall fountain.



A CITY BACK-YARD GARDEN

RUTH DEAN
Landscape
Architect

A wall at the rear end of the garden conceals the original fence. This is relieved by a niche in which stands an English lead figure. Bushes are Chinese privet, and the trees are ailanthus, "tree of Heaven".





Seated in this pergola one gets a vista of the long shrubbery border to the north, the grass walk and balustrades

Behind the house the land slopes away leaving a bank on either side. The garden limits are marked by a long white baluster, giving space for a drive on one side, and below it, a grass walk with a massed planting of hollyhocks, climbing roses, dahlias, gladioli and other border plants against the wall

The view from the house shows the disposition of the beds. At regular intervals evergreen specimens are used for accent points. Bluestone paths wind in and out between the beds to the stretch of lawn beyond. The grassed terrace in the foreground serves for an outdoor dining room in pleasant weather



The CITY GARDEN of G. F. VAN SLYCK

at

ST. PAUL, MINNESOTA



A POOL FOR EVERY GARDEN

Mid-summer, and the song of water round
 and about here, in a garden, trickle and
 splash through the air. Let day and into the
 "sun-dash." Every garden should have some
 water. If no brook or stream, build a
 pool. It will hold water like Goldfish can
 get in the dim shallows. Birds will come

there to bathe and sun themselves on its rim.
 All day long it will mirror the sky and at
 night catch the sparkle of stars. Even a little
 pool will do this, a little pool such as the
 one on the place of Ormsby M. Mitchell at
 Rye, N. Y. The architect was Mott Schmidt.
 Mrs. Ellen Shipman, landscape architect

AMERICAN SCULPTURE FOR AMERICAN GARDENS

An Infant Art That is Worth Fostering

IF sculpture is to be really acclimated in our American gardens it must be indigenous, of a kind that the average citizen can understand. It must be made to look at home in the average American place. It must be treated, not as an outstanding object of art dominating everything in sight, but as symbolizing the spirit of the place, of the flowers and leafage, an integral part of the picture. Such statuary will not be too conspicuous, and is more likely to be of bronze or lead than of marble. It will be more difficult to set especially where the composition is entirely informal, if there are no places contrived for sculpture to fill. Statuary in such surroundings is apt to look as though it had strayed in by mistake or had been casually dropped, as it does in most of our parks.

The important fact underlying this problem of finding the right place, whether in an architectural garden or a commuter's yard, is that the setting ought to be designed as well as the statue. It is not sufficient to give thought to the sculpture; it is necessary to give serious thought to the place where it is to go. If there is no fit and proper place for it, no niche in which it will naturally belong, no scene of inevitable fitness, one must be made. The statue should seem as much at home as a dryad stepping out of the tree in which she lived, or the spirit of the cave or the waterfall.

When the question of putting statuary in a small place arises, the first consideration should be, not "Is it good sculpture in itself, that I happen to like for its own sake?" but, "Is it the kind that harmonizes with its surroundings? Is there any kind of sympathy, obvious or subtle, between the sculptor's thought and the lives and loves and aspirations of those who live with it, or is it as remote from them as the Group of the Laocoon?"

Or to put the same idea in a different way, "Was the sculptor thinking of an American



A fountain, by Mrs. Harry Payne Whitney, designed for an American garden. Courtesy of the Whitney Studio. The text in this article is prepared by Harold A. Caparn, landscape architect



"A Girl Aquaplaning," by Rena Tucker Kohlman, shows the freedom of interpretation characteristic of our American garden sculpture. It stands 20" high and is intended for a basin fountain or a small garden pool where the water could be arranged to spray against the figure. Courtesy of the Milch Galleries



In the cleft of a rock garden you discover a young Pan piping away. The gray stones are immediately animated and the rock plants vitalized. This figure by Janet Scudder is in the Rockefeller gardens at Pocantico Hills and shows the proper placing for such work—secluded and surprising as you come upon it

yard with trees, bushes, grass and flowers, or was he trying merely to express in human shape his sense of beauty, or strength or speed? Was he trying to personify some abstract idea, or to make a figure which would emphasize and vivify the lines of some building?

It is fortunate that many sculptors are now working in the spirit of the ancients in so far as they are trying to express the sentiment of their times, the ideas with which they are most familiar. As a consequence, instead of making fauns or Minervas, they are modeling modern men, women and



"Girl and Fish," a garden figure of happy interpretation, could find a place in a garden pool sprayed as a fountain base or in a stream of rushing water. Harriet Whitney Frishmuth, sculptor. Courtesy of Gorham Gallery



children with such poetic atmosphere as they are able to give them. Many fountains, sundials and other garden objects are designed with the human motive by artists honestly trying to find the true and harmonious note. We have Yankee boys, children, dogs, rabbits, frogs, birds and so on in sculpture. It looks as though in time our garden sculptors would build up a mythology of their own invention.

Silhouetted against the sky and surmounting the garden pool stands young Diana, a clear-cut gem of garden statuary. It is by Janet Scudder and is in the garden of J. L. Severance, Cleveland, Ohio



The sundial offers a wide and varied field of interpretation. This figure, "The Fruit Bearer," by Edward McCartan, has found a sunny spot in the garden of Mrs. Harold I. Pratt, at Glen Cove, L. I. Courtesy of Gorham Gallery



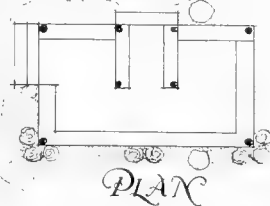
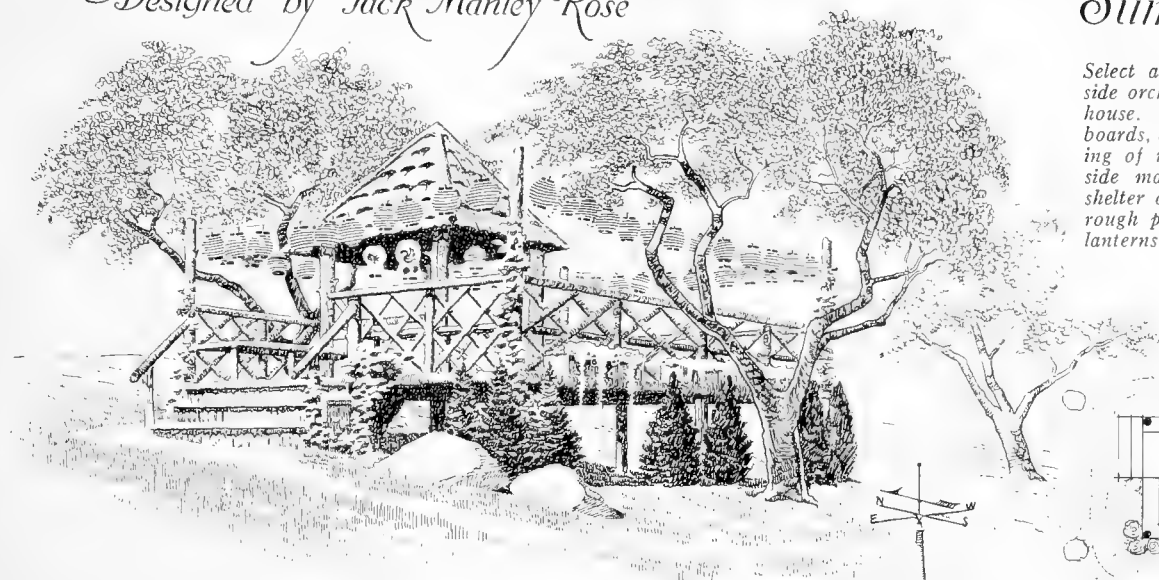
These figures—Morning, Noon and Night—support the table of this sundial in the garden of John Long Severance, Cleveland, Ohio. Harriet Whitney Frishmuth was the sculptor. Courtesy of Gorham Gallery

THREE GARDEN HOUSES

Designed by Jack Manley Rosé

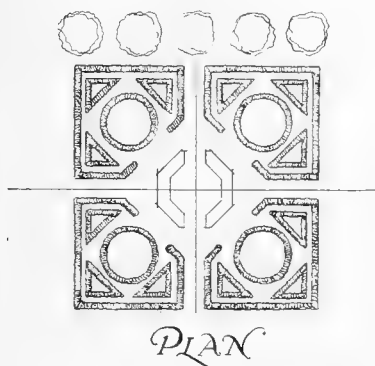
The Rustic Summer House

Select a shady spot in some hill-side orchard for the rustic summer house. Build a platform of rough boards, and fence it in with a railing of rough-cut timber. At one side make a square, peak-roofed shelter or lean-to out of slabs and rough posts. On festive occasions lanterns can be strung about this platform.



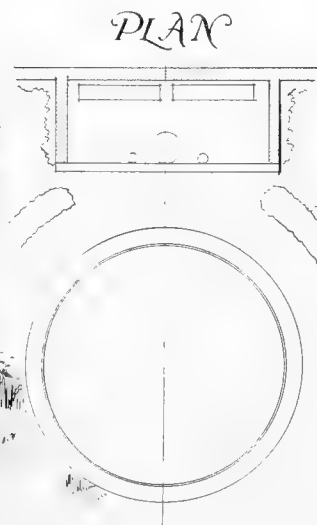
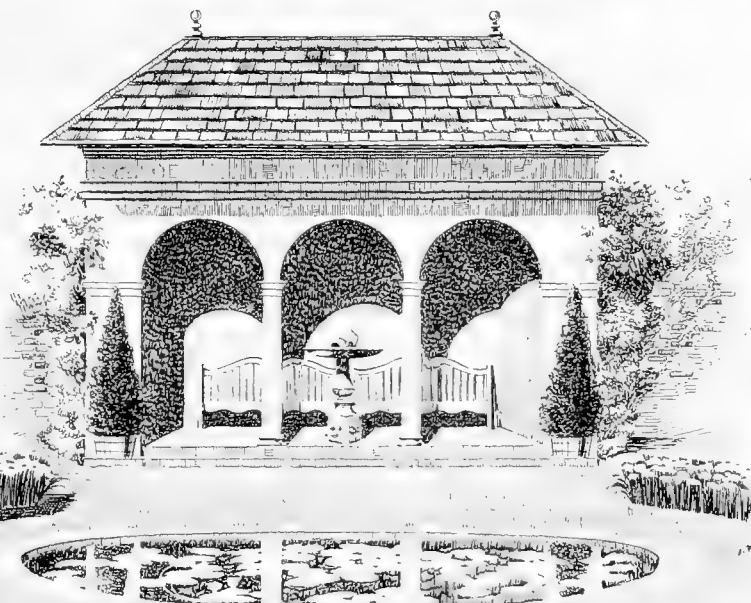
The Colonial Gazabo

The gazabo is an old fashioned garden adornment. It usually marked, as shown on the plan, the crossing of the garden axes. Formal beds, bordered with box, were on all sides. Here stood the octagonal building with lattice walls and open doorways and a curved roof capped by a weathervane. A gazabo adds dignity to the garden scheme.



The English Tea House

An English tea house—or perhaps some would choose to call it Italian—is built against the garden wall. A roof of slate, with wide projecting eaves; a colonnade façade with arched openings, and in the shadows a long bench. Cedars in pots stand on either side. A bird basin marks the middle arch, and a pool is in front.





That stream is the most charming along whose banks one can wander at will, and that pool the most enticing which offers the same opportunity for close companionship with water. The stone margins are alluring pathways between the iris roses here in the Borden garden, where because of the flowing current through the pool the planting is of flowers with sheath-like foliage



The courtyard pool can transform an uninteresting flagged floor into a place of beauty and unique charm. Simplicity of treatment should be maintained throughout—even the rim of the pool needs no elaboration. In the pool can be planted water-lilies, rushes and cyperus, as here at the home of Mr. and Mrs. Gordon K. Ball, Katonah, N. Y. These will lend variety of color, form and size. Openings here and there among the flags can be filled with hardy foliage plants, or small flowering ones such as dwarf phlox. The background as well as the pool should be carefully planned. Heavy massing of foliage is needed there to carry the sturdiness of the court itself. Flowering shrubs are used in this case, with climbing vines behind them. Marian C. Coffin, Landscape Architect



The formal pool invariably calls for a formal setting. Here the wide concrete coping forms an integral and important part of the design

P O O L S T O M I R R O R T H E S K Y

Will Supply that Water Feature Which, Provided It Is in Keeping, Will Add to the Beauty of Any Place

“AND when you have left the desert, and come again to the fresh green of the river valleys, the last thing to which you grow accustomed is the sound of running water.”

The last thing and, it might be added, the most welcome and soothing and wholly refreshing thing. In the glaring heat of the cactus country one misses keenly the softening effect of water in the landscape. By day, at least, the desert lacks intimacy, and when the reason is analyzed it is found to lie largely in the absence of flowing streams. For whether in Nature's gardens or in our own small imitations of her handiwork, water as a purely esthetic feature fills a place which no other one element can hope to attain.

There is no need here to dwell upon this humanizing influence of water in our gardens—our interest is centered rather on how it can be brought to serve our needs. The running brook admits of the greatest variety of effects, perhaps, but for comparatively few of our gardens is it available. Most of us must of necessity turn to the various forms of pools and pond-like water gardens. In the planning, making and care of these are certain well-ordered rules.

Broadly speaking, there are two kinds of water features: the formal

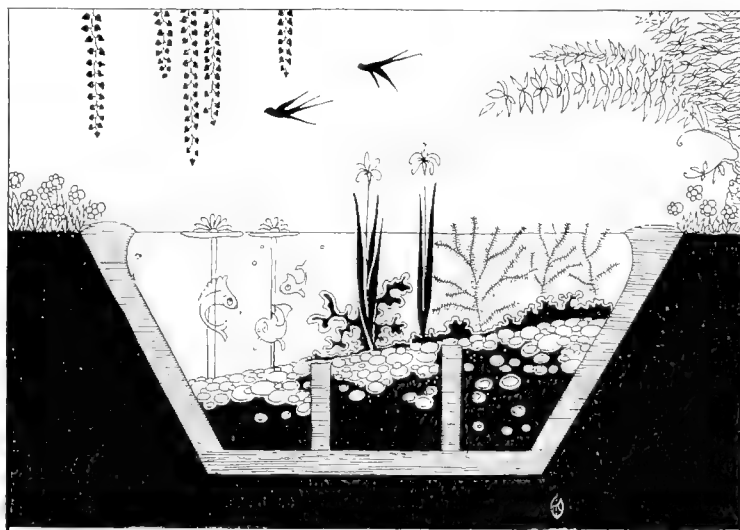
and the naturalistic. The first may take one of several forms, such as the fountain basin pure and simple; the lily pool of regular contour, round, oval or rectangular, placed usually at the intersection of the garden axes; and the geometrically accurate pool whose primary purpose as a mirror of the surrounding trees and architectural features is served without the use of any water plants.

It is not the purpose here to take up in any

detail the subject of garden fountains and their accessories, as these fully deserve an article all to themselves. Today one can find in the open market all manner of fountain designs especially executed for garden use, and the only confronting problem is the selection of that one of them which will harmonize best with the planting scheme in general, and the exact location in particular.

All of these fountains, of course, have one point in common: they call for a source of supply which has enough force to cause the water to flow from the opening provided for it. Provision must also be made to carry off the surplus water when the fountain is in operation. In some cases this overflow can be utilized to form a little rill which wanders away through the garden, fringed with ferns and cardinal flowers in the shady spots and in the sunlight bright with the blue of forget-me-nots catching the color of the sky. Or it may be led to a bird pool in some secluded corner.

In the great majority of pools some provision must be made for replenishing or changing the water, usually by simple inlet and outlet pipes, as suggested above. Much can be done to keep the water free from mosquito larvæ by introducing a few goldfish.



A cross-section of the concrete-lined pool shows the sloping arrangement of the soil and the partitions to hold it in place

LANDSCAPE PLANS for the SMALL PLACE

Good Planting Effects Do Not Necessarily Entail Large Expenditures, as
These Two Schemes Serve to Demonstrate

PLANNING, building and framing a home may be likened to creating, in a small way, a new heaven and a new earth. Especially is this the case with respect to the garden, the magic circle about the home.

Many an owner who has spared no expense on the house itself snaps the bands of his pocketbook at the mere mention of beautifying the lot; yet the setting should be worthy the jewel. He is not stingy; he is simply unaware of the latent possibilities with which his plot of ground teems; that the initial outlay will return in enjoyment a larger dividend than that derivable from a like amount ventured commercially. It is not so much a matter of money as of intelligent and well-directed effort.

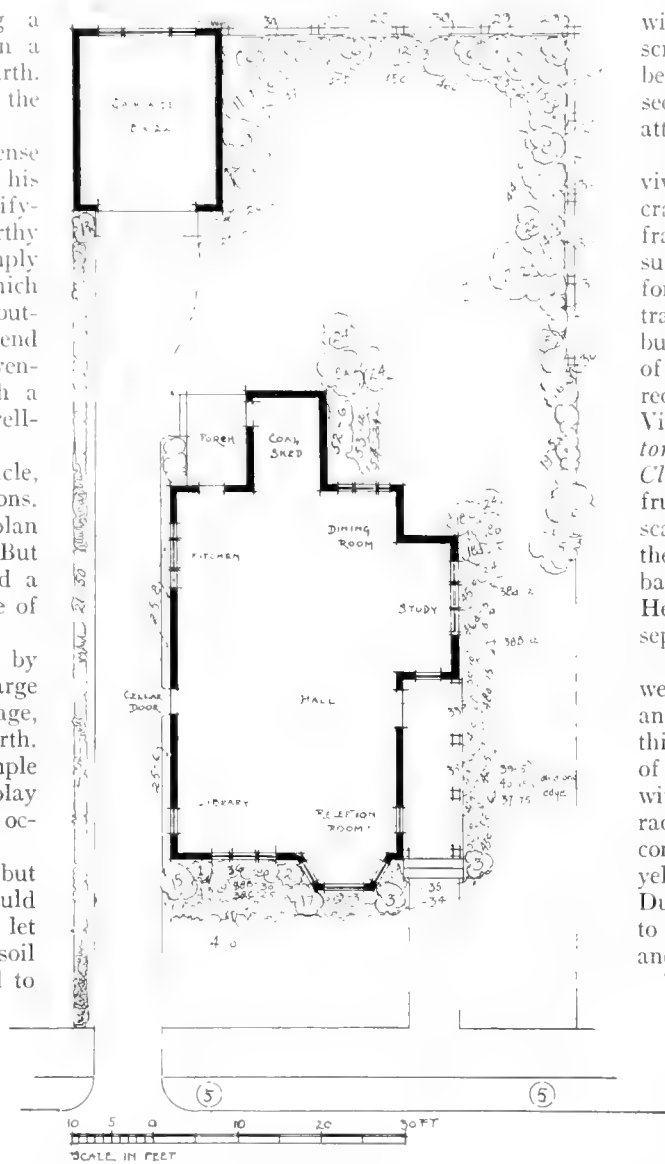
Two problems are presented in this article, which in each case represent actual conditions.

The ideal manner of procedure is to plan the house and grounds simultaneously. But the usual way is to purchase a lot, build a house on it and let the grounds take care of themselves.

In plan No. 1 is a house on a lot 60' by 120', and typical of the suburbs of a large city. As the house is placed, the garage, driveway and service entrance face the north. The obviously best arrangement is a simple lawn at the rear which will serve as play space for the children, drying yard upon occasion, or a flower garden if desired.

Since expense must be considered, all but the roughest work in making a garden should be done by the owners themselves. Here let me emphasize the importance of thorough soil preparation: Remove all gravelly subsoil to a depth of 8" for grass, 18" for shrubs, and 2' for flowers. Indeed, the entire area should be prepared—rather than holes dug for each individual plant—by filling in with good loam with which is incorporated one-fourth its bulk of well-rotted manure. It is a waste of money and effort to put plants into poorly prepared soil.

The back fence is constructed of 6' by 6" posts strung with woven wire, and



Plan No. 1 is for a lot 60' x 120', the type generally found in suburban localities. The scheme for its development and for the development of the property on page 49 was designed by Elizabeth Leonard Strang, landscape architect, who also contributes the text

with a board along the bottom. It is entirely screened by vines. In front of it are a number of Lombardy poplars which help to secure privacy until such time as the shrubs attain the height of the fence.

For these shrubs, in the spring, there is the vivid yellow of forsythia, flowering cherry and crab, choice hybrid lilacs, deutzia and peonies, fragrant mock orange and lemon lily. In summer are roses, tall white daisies, a maple for shade, and a plum tree for fruit. In the train of autumn come the snowberry, high bush cranberry, scarlet thorn, and red hips of the Japanese rose. There is also the vivid red foliage of Japanese barberry, sumac and Virginia creeper; the rich bronze of *Viburnum tomentosum*, and the white flowering mass of *Clematis paniculata*. With winter come the fruits of the barberry and thorn, the orange-scarlet of the bittersweet and the green of the evonymus. The latter also relieves the barrenness of the north side of the house. Here a hedge of unclipped Regel's privet separates the driveway from the adjoining lot.

The front of the house looks particularly well in winter. Here are some arborvitae, and an edging of prostrate juniper. Against this green background in spring, the saffron of the crocus, the forsythia and daffodils, with a few porcelain blue hyacinths, look radiantly gay. This effect is succeeded by a combination of white *Spiraea Van Houttei*, yellow iris, and lavender Darwin tulips. During midsummer it remains a restful green, to be enlivened in the autumn by the gold and white of Japanese anemones.

The flower border at the side of the porch is made up of forget-me-nots, English daisies, and early pink tulips, followed by pink peonies and spirea, iris of violet and purple and lavender-blue, and May-flowering tulips of pink and primrose. In June, early pink phlox l'Evenement contrasts with the larkspur. Grapes shade the porch in late summer and in the border are purple and gold helenium, pink Japanese anemones, and yellow button chrysanthemum.

PLANTING LIST FOR PLAN No. 1

EVERGREENS

- INDEX**
1. *Thuja occidentalis*, American arborvitae. 1 plant, 3'-3½'.
 2. *Thuja occidentalis* var. *Pyramidalis*, arborvitae. Compact, holds color in winter. 1 plant, 1½'-2' high.
 3. *Thuja occidentalis* var. *blobosa*, Globe arborvitae. 2 plants, 12" high.
 4. *Juniperus horizontalis*, dwarf juniper. 10 plants, 1½'-2'.
 5. *Acer platanoides*, Norway maple. 3 plants, 8'-10' high.
 6. *Populus nigra* var. *italica*, Lombardy poplar. Screen to be removed as shrubs grow. 7 plants, 9'-11' high.
 7. Plum tree (or other fruit), var. *Abundantia*. Large amber fruit. 1 plant, 4'-5' high.
 8. *Prunus japonica flore pleno*, double rose-flowered cherry. 1 plant, 3'-4' high.
 9. *Malus floribunda*, flowering crab. Carmine buds opening to white, single. 1 plant, 3'-4' high.
 10. *Cotoneaster coccineus*, native scarlet thorn. Red fruit in autumn. 1 plant, 3'-4' high.

DECIDUOUS SHRUBS

11. *Viburnum opulus*, high bush cranberry. White flowers, large red fruit autumn and winter. 4 plants, 3'-4'.
12. *Viburnum tomentosum*, Japanese snowball. Dark bronze in autumn protect in exposed situations. 3 plants, 2'-3'.
13. *Rhus glabra*, sumac. Vivid autumn red. 4 plants, 2'-3'.
14. *Philadelphus coronarius*, fragrant mock orange. flowers in June. 4 plants, 3'-4' high.
15. *Forsythia Fortunei*, Golden bell. 2 plants, 3'-4' high.
16. *Evonymus alata*, corky-barked evonymus. Vivid autumn red, pendant pink fruits. 3 plants, 4'-5' high.
17. *Spiraea Van Houttei*, Van Houtte's spires. White mass, forus good background for Darwin tulips or iris. 3 plants, 2½'-3½' high.
18. *Syringa vulgaris*, lilac. (A) Souvenir de Louis Spaehe, 1 plant, 2'-3' high; (B) President Grey, bluish lilac. 1 plant, 2'-3' high; (C) Marie le Graye, large single white, 1 plant, 2'-3' high; (D) *Syringa Persica*, Per-

19. *Berberis Thunbergii*, Japanese barberry. Red color in autumn and berries lasting until spring. 10 plants, 1½'-2' high.
20. *Symphoricarpos racemosus*, snowberry. Small shrub, good green-white fruit in autumn. 3 plants, 2'-3' high.
21. *Ligustrum Itoya*, var. *Regelianum*, Regel's privet. A graceful unclipped hedge, 2' apart. 50 plants, 18"-24".
22. Rose, Harrison's Yellow. Old-fashioned double yellow rose, blooms with larkspur. 1 plant, 3' high.
23. *Rosa rugosa alba*, white Japanese rose. Large red fruits in autumn. 4 plants, 1½'-2' high.
24. *Deutzia Lemotnei*, hybrid deutzia. Smaller than spirea, good white background as well. 4 plants, 2'-2½' high.

VINES

25. *Evonymus radicans*, climbing evergreen evonymus. 14 plants, 3 years old.
26. *Ampelopsis Veitchii*, Boston ivy. 2 plants, 3 years old.
27. *Ampelopsis quinquefolia*, Virginia creeper. Vivid autumn red. 2 plants, 3 years old.
28. *Actinidia arguta*, silver vine. Dark green foliage, very dense. 2 plants, 3 years old.
29. *Aristolochia Sipho*, Dutchman's pipe. Immense green leaves, heavy growth, 2 plants, 2 years old.
30. *Celastrus scandens*, bittersweet. Scarlet and orange winter fruits. 3 plants, 2 years old.
31. *Clematis paniculata*, Japanese virgin's bower. Mantle of small white flowers in autumn. 1 plant 2 years old.
32. *Lonicera Halliana*, Hall's evergreen honeysuckle. Fragrant flowers, practically evergreen. 2 plants, 3 years old.
33. Grapes: Catawba, small red, very sweet; Salem, large red. 2 plants 3 years old.

BULBS (Spring)

34. Crocus. Mammoth Golden Yellow. 50 bulbs.
35. Hyacinth, porcelain blue. 6 bulbs.
36. Narcissus, large yellow trumpet, mixed. 100 bulbs.
37. Early tulips. Cottage Maid, pink. 75 bulbs.
38. Darwin tulips. (A) Reverend Ewbank, lavender. 18 bulbs; (B) Moonlight, luminous yellow globes, 25 bulbs; (C)

- Clara Butt, salmon pink. 25 bulbs.

PERENNIALS (Spring)

39. *Myosotis alpestris*, Blue forget-me-not. 15 plants, 8" apart.
40. *Belita perennis*, English daisy. Pink and white. 15 plants, 3" apart.
41. *Iris Germanica*, German iris. 12" apart. (A) Johan De-witt, standards violet, falls purple, 10 plants; (B) *Darius*, standards yellow, falls lilac, 10 plants; (C) *Pallida damatica*, large porcelain blue flower, 10 plants
42. *Spiraea Chimonensis*, pink herbaceous spirea. 5 plants, 18" apart.

PERENNIALS (Summer)

43. Peony varieties. (A) *Festiva maxima*, large double white, flecked crimson; (B) *Arces*, single rose pink, 3 plants; (C) *Albiflora*, white single, golden stamens, 4 plants.
44. *Hemerocallis flava*, early lemon lily. Blooms with mock orange. 10 plants, 15" apart.
45. *Delphinium*, Gold Medal hybrids, larkspur, in tones of blue. 10 plants, 18" apart.
46. Phlox varieties. 15" apart. (A) L'Evenement early pink, with the larkspur, 5 plants; (B) Elizabeth Campbell, salmon overlaid pink, 10 plants; (C) Jeanne d'Arc, late-flowering, pure white.
47. *Chrysanthemum uliginosum*, Giant daisy. Individual flowers like Shasta daisy, in tall clusters. 5 plants, 18" apart.

PERENNIALS (Autumn)

48. *Anemone Japonica*, Japanese anemone. 12" apart. (A) White, 15 plants; (B) Pink, 30 plants.
49. *Aster Novae-Angliae*, royal purple New England aster. Tall, vigorous. 10 plants, 12" apart.
50. *Helenium autumnale*, sneezeweed. Tall, showy, the most glorious autumn yellow. 20 plants, 12" apart.
51. Hardy chrysanthemum. Small yellow button variety. 6 plants, 12" apart.

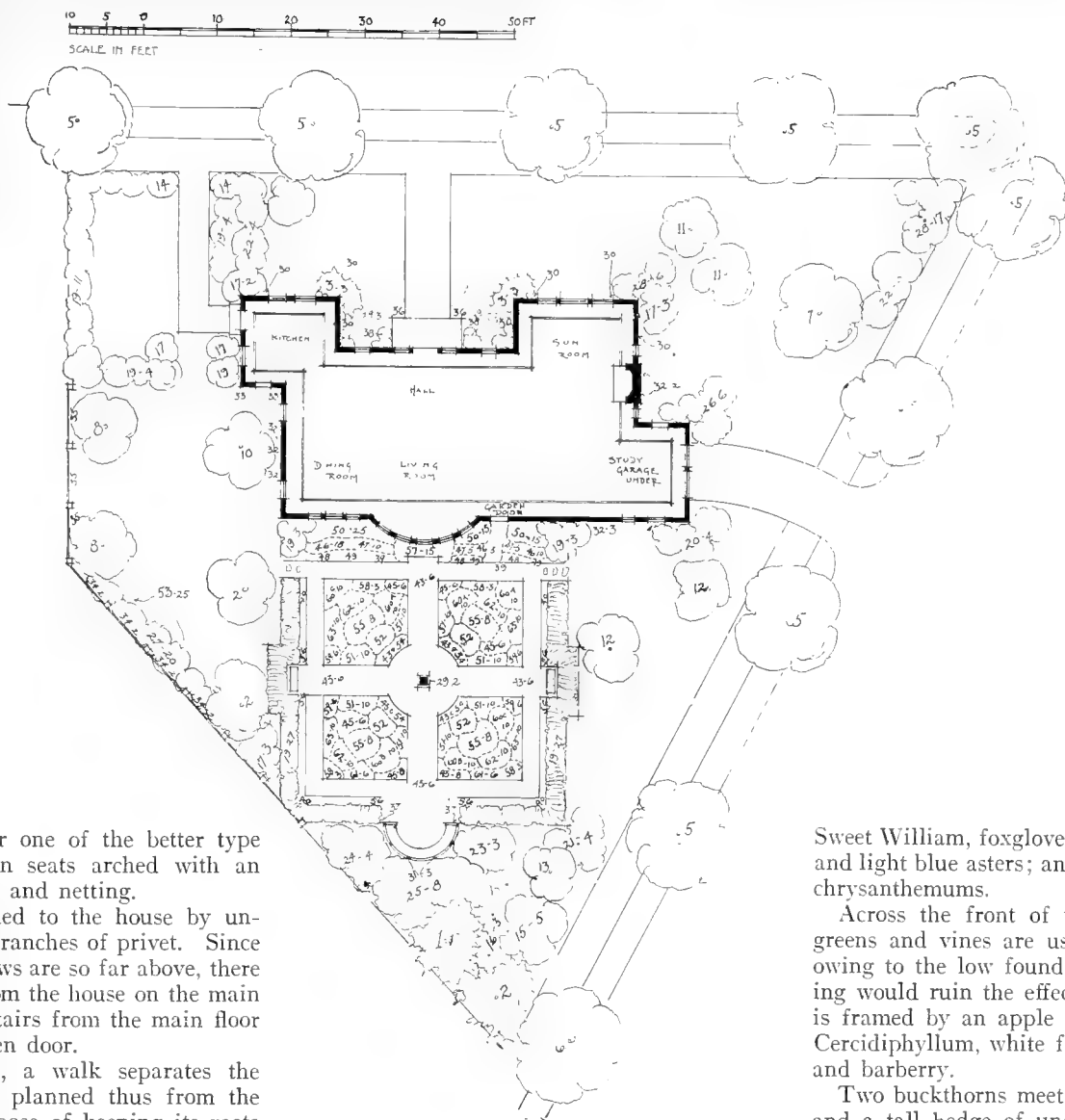
ANNUALS

52. Cosmos. Early pink and white. 6 plants, 2' apart.
53. Calendulas. Sulphur yellow. 12 plants, 12" apart.
54. Ageratum. Light blue. 24 plants, 8" apart.

Plan No. 2 is adaptable to almost any lot or house plan. The land drops abruptly away at the back, affording an opportunity for a garage and billiard room in the basement. From windows above, one gets the effect of a sunken garden, its square, formal shape seeming to belong to the English style of brick house. The walks are of grass; the hedge of clipped privet; the benches simple home-made ones of wood; the bird basin in the center a square pedestal of brick with shallow concrete basin. The circular seat at the end may be constructed at home of brick and concrete, or one of the better type of white wood garden seats arched with an arbor of wrought iron and netting.

The garden is joined to the house by unclipped overhanging branches of privet. Since the living room windows are so far above, there can be no entrance from the house on the main axis, but a flight of stairs from the main floor leads down to a garden door.

Within the garden, a walk separates the beds from the hedge, planned thus from the purely utilitarian purpose of keeping its roots from robbing the flowers. Like the pictured



No. 2 is adaptable to almost any lot or house plan

Elizabethan gardens, the beds should be a mass of color from earliest spring until late fall.

In spring the hemlock, red maple blossoms, tender green of the larch, misty yellow of the spice bush, scarlet Japanese quince and snowy amelanchier outside the hedge, bid a fair morning to the narcissus, early tulips, grape hyacinths and arabis within.

The procession never halts. Presently come white lilacs, flowering crab, wistaria, the whole splashed by the delicate tints of the Darwin tulips. Here are iris, columbine, lilac-blue Phlox divaricata;

Sweet William, foxglove and peonies; helenium and light blue asters; and last the showy yellow chrysanthemums.

Across the front of the house dwarf evergreens and vines are used sparingly, because, owing to the low foundation, too much planting would ruin the effect. The lawn in front is framed by an apple tree, two specimens of Cercidiphyllum, white fringe, spirea, forsythia and barberry.

Two buckthorns meet over the service walk, and a tall hedge of unclipped privet successfully conceals the drying yard at the side.

PLANTING LIST FOR PLAN No. 2

INDEX

EVERGREENS

- 1. *Tsuga canadensis*, American hemlock. 1 plant, 4'-4½' high.
- 2. *Larix Europaea*, European larch. 1 plant, 5'-6' high.
- 3. *Pinus montana*, var. *Mughus*, Mugho pine, dwarf. 6 plants, 12"-15" high.
- 4. *Leucothoe Catesbeii*, lily-of-the-valley shrub. Broad leaved evergreen, small white flowers. 2 plants, 1'-1½' high.

DECIDUOUS TREES

- 5. *Acer saccharum*, sugar maple. Larger than Norway maple. 9 plants, 8'-10' high.
- 6. *Acer rubrum*, red maple. 1 plant, 6'-8' high.
- 7. Apple, 1 plant, 5'-6' high. Alternative choice: Northern Spy, red winter variety; Rhode Island Greening, large winter variety; Fameuse or snow apple, handsome red autumn variety.
- 8. Peach, 2 plants, 4'-5' high. Crawford's Early, yellow freestone, August; Elberta, later yellow.
- 9. Cherry, 2 plants, 4'-5' high. Black Tartarian ox-heart; Yellow Spanish.
- 10. Quince, Champion. Large yellow. 1 plant, 4'-5' high.
- 11. *Cercidiphyllum japonicum*, handsome specimen trees, gray bark, smooth leaves, purplish when young. 2 plants, 4'-6' high.
- 12. *Malus Ionensis* var. *Bechtelii*, double pink flowering crab, very fragrant. 1 plant, 3'-4' high.
- 13. *Malus Scheideckeri*, double flowering crab, shapely habit, rose color. 1 plant 3'-4' high.
- 14. *Rhamnus cathartica*, 2 plants, 2½'-3½' high.

DECIDUOUS SHRUBS

- 15. *Amelanchier canadensis*, shad bush. Very early white flowers, edible fruit in June eaten by birds. 5 plants, 2'-3' high, 4' apart.
- 16. *Benzoin coccinea*, spice bush. Very early yellow flowers. 3 plants, 2'-3' high, 4' apart.
- 17. *Forsythia intermedia*, golden bell. 10 plants, 3'-4' high, 3' apart.
- 18. *Chionanthus Virginica*, white fringe. Flowers in May. foliage good. 1 plant, 2'-3' high.
- 19. *Ligustrum flota*, hardy Japanese privet. Unclipped, 26 plants, 4'-5' high, 3' apart; clipped for hedge, 54 plants, 2'-3' high, 2' apart.
- 20. *Viburnum opulus*, high bush cranberry. 4 plants, 3'-4' high, 4' apart.
- 21. *Cydonia japonica*, Japan quince. Select some of the pink hybrids if scarlet is not desired. 4 plants, 2'-3' high, 3' apart.

- 22. *Spiraea Van Houttei*, Van Houtte's spirea. 9 plants, 2'-3' high, 3' apart.

- 23. *Evonymus alatus*, cork-barked evonymus. 3 plants, 2'-3' high, 4' apart.
- 24. *Philadelphus grandiflorus*, the tallest variety of mock orange. 4 plants, 3'-4' high, 4' apart.
- 25. *Syringa vulgaris*, var. *alba*, common white lilac. Grows taller than the purple. 8 plants, 2'-3' high, 4' apart.
- 26. *Ribes aureum*, flowering currant. Early, intensely fragrant yellow flowers. 6 plants 2'-3' high, 3' apart.
- 27. *Rosa rugosa*, var. *Blanche de Coubert*, double white Japanese rose. 20 plants 1½'-2' high, 2' apart.
- 28. *Berberis Thunbergii*, Japanese barberry. Unclipped in masses. 17 plants, 1½'-2' high, 2' apart.

VINES

- 29. *Evonymus radicans*, climbing evergreen evonymus. Clings to brick. 8 plants, 3 years old.
- 30. *Schizofragma hydrangeoides*, climbing hydrangea. Clings to brick and stone. 6 plants, 2 years old.
- 31. *Ampelopsis heterophylla*, turquoise vine. Exquisite blue and purple berries, grape-like leaf. 3 plants, 2 years old.
- 32. *Ampelopsis Veitchii*, Boston ivy. 8 plants, 2 years old.
- 33. *Lonicera Halliana*, Hall's honeysuckle. 2 plants, 3 years old.
- 34. Climbing rose, Silver Moon. Large single white. 8 plants, 4' pot.
- 35. Grape, Moore's Early. Large blue variety. 3 plants, 2 years old, 8' apart.
- 36. *Wistaria Chinensis*, purple wistaria. 2 plants, 4 years old.
- 37. *Celastrus scandens*, bittersweet. 2 plants, 2 years old.

BULBS (Spring)

- 38. Crocus Mammoth Golden Yellow. Among evergreens across front of house. 200 bulbs.
- 39. *Muscari botryoides*, blue grape hyacinth. In flower garden at foot of hedge. 200 bulbs.
- 40. Narcissus Sir Watkin, large yellow trumpet. 100 bulbs.
- 41. Early tulips. (A) Duke of Albany, very early pink. 50 bulbs around circle back of arabis and nepeta; (B) Princess Wilhelmina, deeper pink. 50 bulbs around peonies; (C) Goldfinch, pure yellow, 50 bulbs near Japanese iris.
- 42. Darwin tulips. Selected varieties of lavender, rose and pink. 100 bulbs near outer corners of beds.

PERENNIALS (Spring)

- 43. *Arabis alpina*, white rock cress. 40 plants, 12" apart.
- 44. *Alyssum saxatile*, Golden tuft. Vivid yellow for accents. 8 plants.
- 45. *Iris pallida*, large porcelain blue iris. 40 plants, 12" apart.
- 46. *Dicksonia punctiloba*, hay-scented fern. Sun or shade. 18 plants, 12" apart.
- 47. *Aquilegia hybrids*, hybrid columbines. Pink and cream. 20 plants, 12" apart.
- 48. *Phlox divaricata*, wild Sweet William. Large, fragrant, lilac-blue. 15 plants, 12" apart.

PERENNIALS (Summer)

- 49. *Heuchera sanguinea*, coral bells. Small red flowers on slender red stems, bloom all summer, leaves evergreen. 15 plants, 12" apart.
- 50. *Digitalis gloriosiflora*, foxgloves. Mixed carmine pink and white. 55 plants, 12" apart.
- 51. *Dianthus barbatus*, white Sweet William. Take up after blooming and replace with pink verbenas. 80 plants, 8" apart.
- 52. *Paeonia*, var. *rosea elegans*, peony. Double rose, creamy center. 4 specimen plants.
- 53. *Papaver orientale*, red Oriental poppy. 25 plants, 15" apart.
- 54. *Nepeta Mussini*, mint. Mauve flowers, gray leaves, excellent for edging. 15 plants, 12" apart.
- 55. *Delphinium hybrids*, larkspur. 32 plants, 18" apart.
- 56. *Oenothera Missouriensis*, Missouri primrose. Large solitary yellow flowers useful as accents. 6 plants, 12" apart.
- 57. *Funkia lanceolata*, lavender day lily. Late, blooms in September. 15 plants, 12" apart.
- 58. *Anthemis tinctoria*, chamomile. Yellow daisy, lasts all summer. 12 plants, 18" apart.
- 59. *Iris Kaempferi*, Japanese iris. Lavender. 25 plants, 12" apart.
- 60. Phlox varieties. 15" apart. (A) Jeanne d'Arc, late pure white, 40 plants; (B) R. P. Struthers, vivid coral red, 20 plants; (C) F. G. von Lassburg, large white, 10 plants.

PERENNIALS (Autumn)

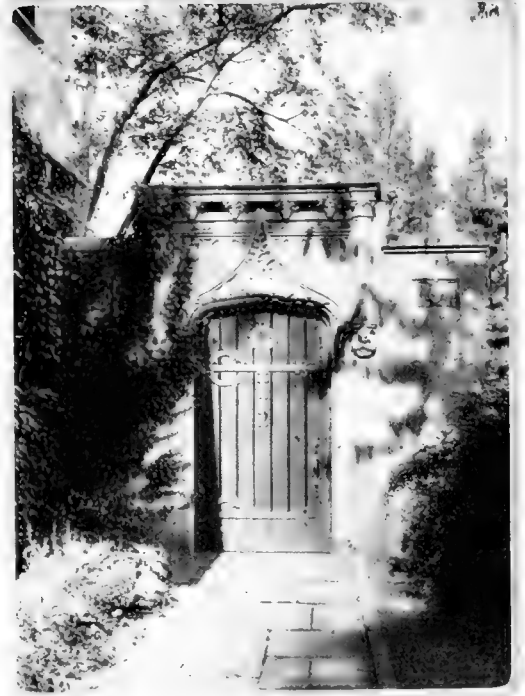
- 61. *Helenium autumnale*, yellow sneezeweed. 12 plants, 12" apart.
- 62. Aster Feltham Blue. Medium height, large masses porcelain blue flowers. 40 plants, 12" apart.
- 63. Hardy chrysanthemums, aster-flowered variety Etoile d'Or, vivid yellow. 40 plants, 12" apart.



HOW DO YOU ENTER YOUR GARDEN?

*Six Suggestions for
Garden Gates*

*If the garden is walled,
the gate can be of solid
planks bolted together,
which will be in keeping
with the rugged character
of the brick wall. John
Russell Pope, architect*



*The garden gate of wide
wooden planks can be
elaborated with wrought
iron strap hinges in char-
acter with the architectural
design of the wall and the
decorations upon it*



*(Below) Set between brick
posts is a rounded arch
wooden gate with open,
decorative panels on each
side. The Colonial char-
acter is in keeping with
the posts*

*(Left) A simple gate of
distinguished design is
arched with a pergola
treatment set on high posts
from which the gates are
hung. Courtesy of the
Matthews Mfg. Co.*



*A wrought iron gate affords a
glimpse of the garden beyond
Its design is simple*



*(Right) Finally one can have a
frame built up in the English
fashion with an arched top*



If one is fortunate enough to have an old house or a new house in the old style, she can use an arched garden gate, such as this on the place of Mr. and Mrs. Vivian Spencer at Avondale, R. I. And she can plant along the fence a box or box-barberry edged border filled with heliotrope, lavender phlox and pink scabiosa mingled with lilies and purple gladioli



*On this same place the doorway garden is planted with a freedom reminiscent of English cottage gardens. There are annuals growing in tangled masses — yellow and orange calendulas, flame-colored snapdragons, richly tinted zinnias and bronze dahlias — all intermingled, with here and there an enlivening touch of violet blue *Salvia farinacea**

FLOWERS *for the* GARDEN GATE—TWO PLANTING SUGGESTIONS *for* SIMPLE PLACES

MARIAN C. COFFIN, *Landscape Architect*

STONE AND THE GARDEN PATH

Paved Walks and How to Make Them.

THE garden without walks fails in half its mission. It may be beautiful, as a field corner thick with wild asters and goldenrod is beautiful— but it is not wholly intimate and inviting. A garden should be more than merely a pretty thing to be admired from outside. You must be able to wander through it easily and without thought of stumbling or treading on tender growing things, if you are to know it at its best. It must have paths to guide you naturally and without conscious thought.

Of a variety of paths—gravel, earth, turf and others—let us not speak here. Each has its special place, each its particular advantages. But the path of large stones is so comparatively seldom built, and its good qualities relatively so little appreciated, that it calls for more than passing attention.

In the first place, there is practical utility. Paths like those illustrated on these pages are always dry, firm and solid. There is no mud or dust to walk in, no grass to keep eternally cutting, no back-breaking raking, grading or filling to do after the initial work has been completed.

And there are other more esthetic but no less important features. There is something sanely substantial and forthright about the path of large stones. It knows where it is going, and why; it lends an air of permanency and dependability to the whole garden. The age and strength of the rock slabs contrast effectively with the fragile beauty of the flowers. To make the comparison still more marked, low-growing plants like snow-in-summer, speedwell and rock pink may be planted here and



The paved garden walk lends an air of solid permanence to the whole setting, in contrast to the transient flowers. Olmsted Brothers, landscape architects

there in the spaces between the stones themselves. Along the sides, where their taller growth will not interfere with passing feet, plants of native wild columbine can lift their coral and gold heads in the May sunshine.

The actual making of such a path calls for more care than the casual beholder would suspect.

First, there is the matter of the foundation. This must be solidly made of well graded and packed earth, perhaps with an underlying layer of broken rocks for drainage if the location is low and tends to wetness. The level of the path, of course, should be raised enough to prevent surface water from collecting.

The rock slabs themselves may be of native fieldstone dressed roughly flat on the upper side, or else irregular paving stones of the sort used for ordinary street sidewalks. In either case they should be of varying sizes and shapes, except where an extremely formal effect is desired. Here uniformity of outline is called for. The limits of size vary according to the width of the path and the general scale of the surroundings, but as a general rule none of the slabs should measure less than 1' or more than 3' across the longest way.



Regularly shaped slabs arranged in a geometrical manner are sufficiently formal in effect to fit in well with a scheme such as this

The stones ought to be bedded firmly in the soil when the latter has had plenty of time to settle after the final grading and has been well tamped down. The surface of the slabs should be raised $\frac{1}{2}$ " to 1" above the top of the earth so that during heavy rains they will not be flooded.

As the photographs clearly show, a considerable variety in size as well as outline of the paving rocks is necessary to permit laying them in a wholly pleasing pattern. Anything in the nature of a geometrical, regular design should be avoided except in really formal work. On the other hand, guard against the appearance of "spottiness" which inevitably follows a too great massing of either large or small rocks. When the path is completed it ought to present a uniform appearance when considered as a whole—no particular sections of it should stand out more prominently than the others because of the size or arrangement of the stones.

The path of paved stones is sanely substantial and forthright. It knows where it is going, and why. The effect of even pattern is evident here



The spaces between the stones should also be irregular in both size and shape. It is they which outline the pattern of the path, and the slabs should never be so closely fitted that these spaces lack prominence. If this point is overlooked, the finished job will be in large measure flat, stale and unprofitable. The photograph at the left shows a path in which the pattern has been well developed.

From start to finish, keep this in mind: a path exists primarily to walk upon, and it should invite rather than discourage involuntary footsteps. To this end its surface must be level and firm. It should never inspire one with the sensation of skipping along a stream on a succession of unevenly spaced and wobbly boulders. "Watch your step" should be as unnecessary an admonition to the stroller along the slab-laid garden walk as it is needful in the maelstrom of a New York subway station at the rush hour.

The stones should be of varying sizes and shapes. Grass may be sown between them, or low flowering plants put in. Kirkland Cutter, architect





This garden, on the place of Dr. and Mrs. J. Clifton Edgar, at Greenwich, Conn., was built in a typical Connecticut outcrop of rock. Consequently the steps were kept rugged

Where there is a slight rise in the garden, the point can be accented by shallow, flat stones set into the turf, as in the garden of Mr. and Mrs. J. Henry Alexander, at Roslyn, L. I.

STEPS IN THE GARDEN

MARIAN C. COFFIN, *Landscape Architect*



A garden of varying levels is naturally marked by stone or brick retaining walls broken at convenient intervals by steps. These steps can be of stone or brick or cement. They should be hidden fairly well by flowers and vines. Here, in the garden of Mr. and Mrs. Bertram Borden at Oceanic, N. J., polyantha roses grow over the wall, foxgloves in the lower garden and anachars in the upper

ARBORS, SUMMER-HOUSES and TRELLISES

A Discussion of the General Principles Which Underlie Their Use—The Questions of Style, Location and Proper Emphasis in the Landscape Scheme

FIRST come, first served, and so to first thoughts, which are usually indicative of something. They are especially significant when they have to do with outdoors. So what is the first thought when one speaks of an arbor?

With the word there comes a sense of leafy shade on a summer day, of vagrant winds, sweet with all outdoors, of insect noises, of flickering wings and the importance of bug hunting and nest tending and what-not; and above all else, freedom from the everlasting impositions of conventionality as represented by a



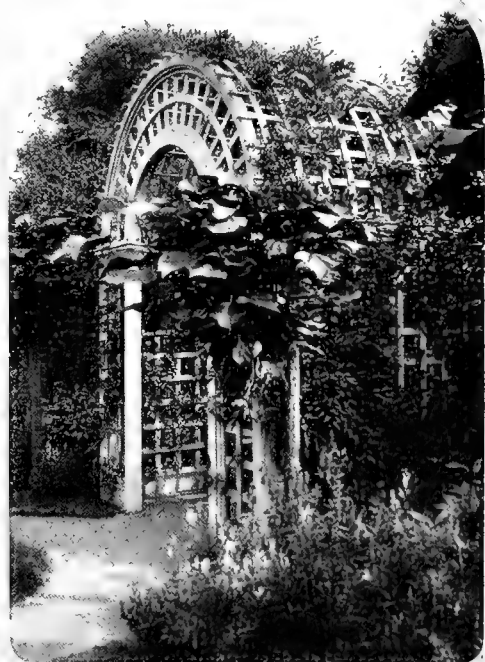
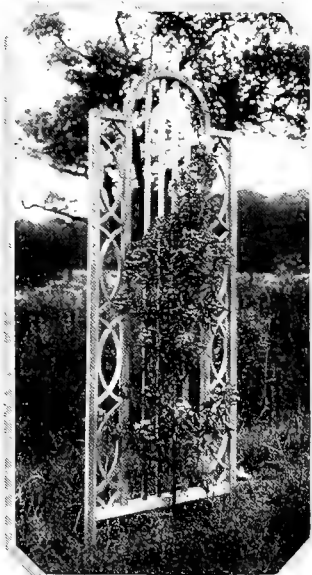
Where an individual plant needs support a trellis may serve a good purpose. But a random scattering of detached trellises should be avoided in every case. Unity of design there must be

Another use of trellis is found in the residence of J. R. Potter, Esq., Great Neck, L. I. Here it incloses a pleasant outdoor living room under trees. Paul Hertwig was the architect

house. Pan and his court lurk sometimes near, if not within, the shadow of an arbor, but they never approach a house.

There must be nothing about an arbor to dispel this sense of freedom, nothing—continuing the fancy—that will alarm the timidest faun or nymph, or make them fearful of imprisonment. Yet it must be a shelter and afford seclusion from the sun and heat; and even possibly from a little summer shower, though certainly not roofed to withstand real rain. Where rain cannot go, dryads and satyrs never will!

Then it must be so open that birds and bees and breezes may come and go at will; and it must be so completely in harmony with nature all around that both bees and birds will frequent it as freely as they do the trees. Within these specifications it may take any form and be made of any material one wishes; and it may be situated wherever the natural landscape, or a preconceived picture, may determine. But it must always follow the architectural lead of the house.



The true arbor is never roofed to withstand a real rain. Its very nature demands that it be open for free passage of bird or bee or breeze

A sense of leafy shade on a sunny day, of freedom from the imposed conventionality of a house, should characterize the well planned arbor

THE RIVEN ROCK



Ever since Moses struck the rock garden makers have built wall fountains. This is at the home of Earl P. Charlton, Westport Harbor, N. Y. Farley & Hooper were the architects.



Peering from the ivy that drapes a stucco wall is a satyr's head fountain. It is on the grounds of the H. A. Rogers place at Tuxedo, N. Y. Walker & Gillette were the architects.



The wall fountain can be treated in an infinite number of ways. It may be a sharp contrast to its background or, as here, be identical in tone and material. Walker & Gillette, architects.



To balance the statue, in the garden below, is a wall fountain also placed in a niche. This is in the garden of Herbert L. Pratt, Glen Cove, L. I. James L. Greenleaf, architect.



THE AXIS IN GARDEN DESIGN

Simple Principles and Rules Upon Which the Landscape Arrangement Should Be Based, and an Example of How They Are Applied

NO garden can be truly successful if it wilfully violates certain simple rules of design which should be carefully considered before a spade is turned. Its beds and borders may proceed from month to month with the most delightful effects of color and mass; its walls and steps and architectural ornament may be executed with skill and exquisite taste, yet it will remain a meaningless array of misplaced beauty if it lacks the essential relation it should bear to its surroundings, and if its various parts want a proper coördination to bring them into focus and to give them their inherent value. It will be rather like a marionette without strings.

Stripping off all artistic vagueness and getting right down to the bones of garden design, we find that in this case the strings are nothing more than the center-lines or axes; and that a proper arrangement of these, one to bring into a convincing and logical relation to the garden the surrounding natural and architectural features, is the skeleton of the scheme. Upon this structure of strings that ties the garden to the house and to the dominant natural growths of the site, the actual plan is made.

A graphic illustration of the evolution of a garden scheme is given in the accompanying series of plans. These show the development of the axial lines and, by means of them, the subsequent development of the garden on a place of moderate size where the character of the ground is consistently level and unbroken throughout. Plan 1 represents the house and site before any center-lines are drawn and a final arrangement seems correspondingly obscure. The letters on the plans mark the several features of the property that must be taken into consideration in order appropriately to locate and design the garden. Thus "A" is the house of which the extremity of the south wing is a loggia or built-in porch opening upon a cluster of closely grouped trees. "B" indicates the most suitable spot for the flower

garden, "C" the open lawn space, "E" the vegetable garden, "F" the tennis court and "G" the garage. The disposition of these various elements of the plant is arrived at by a study of the adaptability of the ground for each. Thus, it is desired to reach the garden through the loggia, but as there is a greater wish to keep the space on the east front of the house in open lawn, and as the space just off the loggia to the south is far too shady, it seems best to place it at "B" as shown. Then, at "D" the vegetable garden will connect with the service portion of the house and, at the same time, balance the flower garden on the opposite side. This leaves a place east of the gardens and the lawn for a tennis court and completes the sketching in of all the spaces that lie in some relation to the garden.

As yet there has been no definite tying in of these various elements. The gardens, lawn and tennis court have been apportioned to their proper places, but there has been no attempt made to shape them up or to connect them to the house or to each other. To do this it is first necessary to draw in the axis lines of the house group as in Plan 2. This house plan being simple and symmetrical, its axes will bisect the plan in either direction; the main axis, 1, cutting the principal faces of the building and the secondary axis, 2, cutting the less important faces at the ends. These center lines must form a right angle with whatever face of the house they happen to cut. Axes are drawn through the garage and kitchen yard to help in the development of the service portion of the grounds.

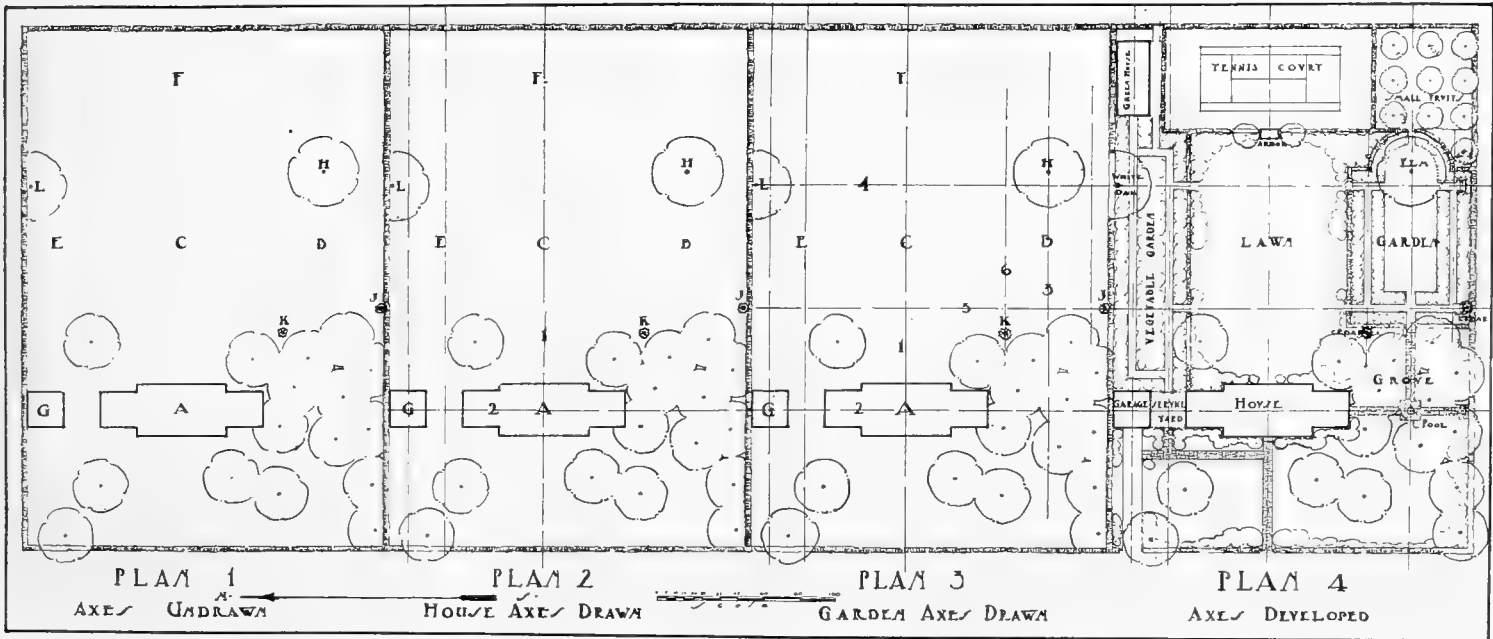
The approximate location of the flower garden having been already determined, it is now necessary to devise a system of axes upon which it may be developed more precisely, and by which it may be convincingly connected with either one of the house axes. As there is in this instance no unusual characteristic in the topography of the site or an existing minor bit of architecture from which to get a start

we must use the trees. Of all those on the property only the ones designated by letter are of sufficient individual excellence to warrant their inclusion in the scheme as units in the design. A high arching elm is marked "H", two well developed cedars "J" and "K", and a nicely proportioned white oak "L". As the elm, "F", might serve as the keynote of the garden and as it is just about halfway between the property line and the edge of the space allotted to the lawn, a line, 3 on Plan 3, is made to bisect it and, furthermore, to intersect the secondary axis of the house with a right angle.

We now have the main center-line of the garden and have it connected with a center line of the house, but we want something more than a backbone and we want to tie in also, if possible, the two cedars and the white oak. The cedar, "G", and the white oak are readily worked into the scheme by connecting them to the established main axis of the garden by lines 4 and 5.

The next step is the shaping up and the adding of flesh to the skeleton. In plan 4 we see how the different elements of the scheme have been proportioned and how the paths and boundaries have been located by means of the axis lines previously sketched in. The cross axis of the house, line 2, formed the basis for a path from the loggia to a pool in the paving of the path, marking the intersection of the main garden axis, then on to a seat, where it terminates at the high boundary of the property line.

It is largely a matter of taste whether or not to mark with some ornament the intersections of the cross axis, lines 4 and 5, with the main axis of the garden. They have served their purpose in defining to some extent the limits of the garden and in creating the cross lines. Line 6, tying in the cedar "K", has become the reason for the longitudinal path on the north side of the garden and the corresponding one along the south side.





VISTAS IN THE GARDEN

THE primary purpose of a path is to lead one somewhere. Thus was it in the beginning, is now, and, so far as one can foresee, will indefinitely remain.

Yes, a path must go somewhere, if its existence is to be justified. It should possess a destination not only in the physical sense, but in the mental as well. In other words, the ideal path carries one's eyes as well as feet from here to there. It is a vista, more or less pronounced according as it is straight or winding.

This vista quality is one of the chief assets of an attractive path, for vistas in the garden there must be. Without them we feel confined, shut in by too near boundaries of flower, shrub and tree. Our imaginations, together with our eyes, have too little to feed upon where there is no guiding sense of distance. We need the contrasts and comparisons provided by a receding view.

A vista need by no means be as ambitious as the two examples shown on this page. It may be no more than a glimpse between two flowering shrubs to a garden seat a dozen yards away; or a bit of distant mountain seen through a gap in the boundary hedge. Yet it must always be justified—generally by



Creating a successful vista is a matter of real study. Keep in mind that the object is to draw one's attention directly to some goal more or less distant

the existence at its far end of some object which serves as a definite goal for the eye.

Rules for planning vistas can be no more than suggestive, as the conditions and possi-

The vista's purpose is to lead the eye into the distance. Here on the estate of Harrison Bennett, Esq., at Weston, Mass., this effect is achieved by the straight line and contrasting color of the central walk

bilities of different places are rarely identical. Keep in mind the general principle—that a vista is a more or less narrowed glimpse into the distance, gaining its effect through the contrast of near and far objects.

Two mediums may be utilized in framing the sides of the vista, for distinct sides there should be in the majority of cases. The first is architectural in character, exemplified by the pergola, the gateway in wall or fence, the pillars of the covered terrace. The second, and by far the more generally available, is the planting of trees and shrubs. Here lie the biggest possibilities, the best chance to attain success with the minimum of labor and expense. Growing things are Nature's frame, ready to your hand.

Work for perspective in the plan of your garden or grounds. If there is even an indefinable feeling of undue restriction, of overcrowding, look about for vista possibilities. It is not all of landscape planting to plant; more frequently than most of us realize the solution of our difficulties on the road to garden perfection lies in elimination rather than addition.

It is often advisable to break the garden vista with the occasional relief of an arbor. This is done on the Newport place of Mrs. Hugh D. Auchincloss, where fluted columns support the arbors in the rose garden and lattice affords a background for climbing roses. The long graveled path ends in a rustic gate and a vista of sea and sky



The garden vista is usually accented by a path which forms the major axis in the garden design. Where it crosses other axes the spot can be marked by a sundial or bird bath. In the gardens of Mrs. John S. Newberry at Grosse Pointe Farms, near Detroit, the path leads the eye to the pergola on one side and the tangled fields

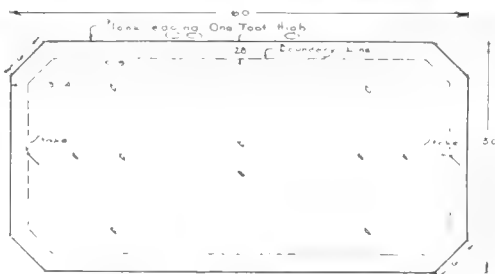
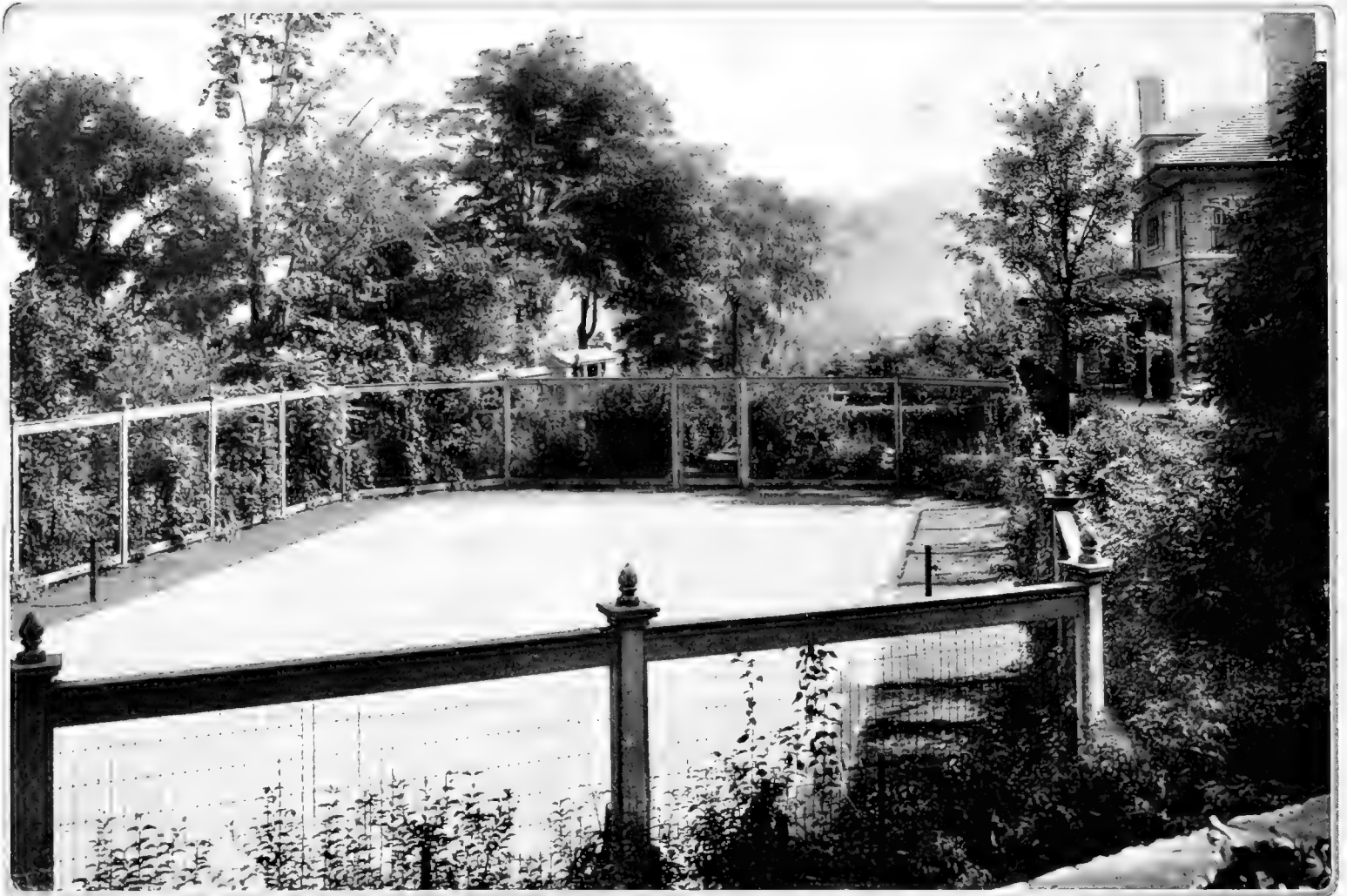


DIAGRAM SHOWING CROQUET LAWN DIMENSION

The tennis court should have adequate backstop and side fences. These may be well masked by planting. William Pitkin, landscape architect

GAMES and the LANDSCAPE SCHEME

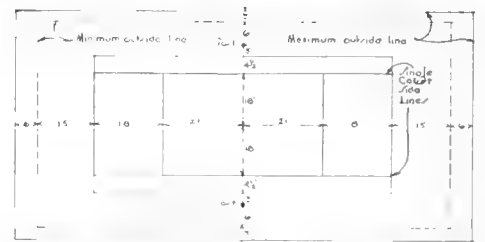
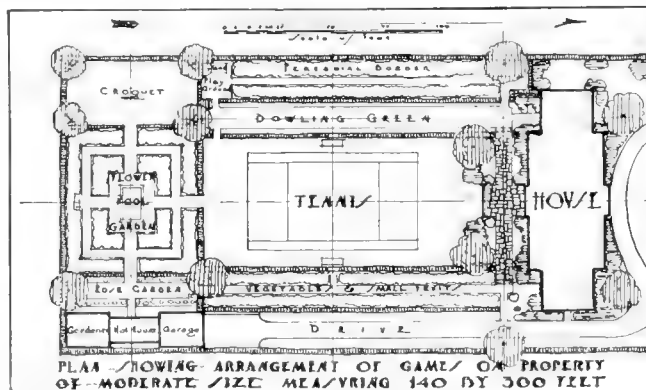


DIAGRAM SHOWING TENNIS COURT DIMENSION

Croquet has come into its own again as a country home game. It requires a space only 30' by 60', including the boundary lines of planks set on edge

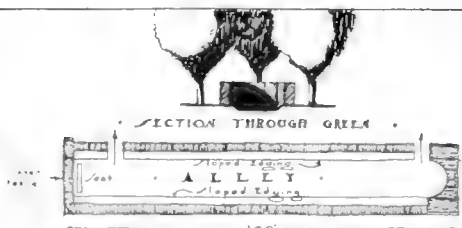
Lawn bowling is one of those games too seldom played, perhaps because it is not well known. It calls for a smooth, sunken alley 10' wide and 60' to 125' long



PLAN SHOWING ARRANGEMENT OF GAMES ON PROPERTY OF MODERATE SIZE MEASURING 140 BY 300 FEET

The single and double tennis courts are the same size except for the additional 4½' alleys on either side of the latter. Turf, clay or concrete is the usual playing surface

For the golf enthusiast there is the game of clock golf, utilizing a putting green with consecutive playing positions corresponding to the figures on a clock's dial



PLAN OF TYPICAL PRIVATE BOWLING GREEN

- LENGTH TO BE DETERMINED BY AVAILABLE SPACE AND TO BE NOT MORE THAN 125' NOR LESS THAN 60'
- WIDTH BETWEEN SLOPED EDGING TO BE NOT LESS THAN 10'

The playing area, whether for tennis, croquet, bowls or what-not, should form a definite part of the landscaping scheme. The best plan is to include it when the planting design is first worked out. These game centers were designed by Richard H. Pratt, 2nd, Landscape Architect

DIAGRAM SHOWING CLOCK GOLF LAYOUT

Dimension of green varies according to available space, and distance from line to hole with desire of players.



A PORTFOLIO OF BEAUTIFUL GARDENS

*Being Views of Many Types of
Gardens in Various Sections of The
United States, England and in Italy*





THE LANDSCAPE PICTURE

To complete the natural setting of the residence of Frank B. Wells at Burlington, Vt., pine trees were moved near the house, thus filling out the picture begun by the natural woodland of hardy pines on the bluff before it. Ralph M. Weinrichter was the landscape architect of the place.



(Above) Seen from an airplane, the garden of "Knollwood", the home of Mr. Charles I. Hudson, at East Norwich, Long Island, presents the full beauty of its Italian plan, taken from designs brought from Italy in the time of François I. The first terrace is a blue garden, and each plot below has its own color scheme surrounded by hedges. Hiss & Weekes, architects



(Left) In the older days, a garden had its portrait sketched in what was called a bird's-eye view. The fashionable garden of today has its photograph taken from a hovering airplane. This lovely garden at "Meudon", the home of Mr. William G. Guthrie, at Locust Valley, Long Island, is planted with a great variety of evergreens. C. P. H. Gilbert, architect

THE COMPLETE GARDEN PLAN
IS BEST SEEN FROM THE AIR



From the lily pool one can look up the grass paths between the orderly beds to the house

Standing on the terrace before the house one catches this glimpse of the garden and its setting



axis terminates in a semi-circular lily pool held in a stone curbing.

At this point the ways divide. On each side stone steps lead to a pergola so heavily bowered in vines that one does not at first suspect it of being a pergola. This forms the exedra or termination of the garden.

Behind rises a rock-ribbed hillside heavily forested. The garden, then, is like a jewel of many colors in a setting of woods, its formal lines and varied colors contrasting with the rugged character of the immediate surroundings.

THE GARDEN of DR. J. HENRY LANCASHIRE MANCHESTER, MASS.

MRS. WM. A. HUTCHESON, *Landscape Architect*

ONE should not come upon a formal garden too suddenly. The way to it should be a gradual progress from the house. This axiom is beautifully illustrated in the garden at the home of Dr. J. Henry Lancashire at Manchester, Mass.

From the grass terrace before the house—a terrace worked out by a stone wall and accented with pottery jars—one passes by slow degrees along grass walks down to the lower level of the garden. Here are formal beds brilliant with color the season through. The main



A perspective view shows the design of the beds, the pool and pergola covered with vines

On either side of the pergola steps are large clipped bay trees. The border planting under the wall includes bright poppies and stately lilies, primroses and Solomon's Seal, peonies and iris, with spireas and tall roses against the wall and climbing roses above.

The formality of the garden is accounted for by pyramidal box specimens placed at regular intervals along the edge of the middle path and the box by which the beds are bordered. In the beds are all the well-loved perennials and some annuals—delphinium and digitalis, Campanula, iris, daisies, snapdragons, peonies, poppies, feverfew, heliotrope. Phlox, that splendid color contribution to any



Little side paths lead to hidden glimpses of great loveliness in color and profusion of blossom

small roses, iris and buddleia. The lower wall of the garden is not so high because—and this is the surprise!—the slope below it stretches down to the sea.

Bisecting the garden are two paths, at the end of which are pretty garden ornaments—bird baths and satyrs looking out from a bower of roses, an old stone well-head, and benches set in shady, secluded corners among fine plantings

of rhododendrons and grapevines.

The sea beyond, the rock-ribbed hills behind; inside these walls, comfortable formality, soft grass paths, touches of statuary, a lily pool mirroring the sky and color from early spring to the first frost of autumn.

garden, has been judiciously and effectively used in various shades of pink and white.

This is a walled garden, the forest at the upper side being cut off by a high retaining wall covered with vines and apple trees on espaliers. Beneath the walls are hollyhocks,

IN THE GARDENS OF MISS ROSINA HOYT

SOUTHAMPTON,
LONG ISLAND

FERRUCCIO VITALE
Landscape Architect



*Between tubbed hy-
drangeas steps lead up
from the lawn to the
vine shaded coolness of
the pergola*

*Full consideration
has been given to
the effectiveness of
unbroken lawn
spaces stretching
down from the
house to the for-
mal lily pool and
bounded by massed
evergreens whose
variety and ar-
rangement are
especially worthy
of attention. Hiss
& Weekes, archi-
tects of the house*



*The reverse of the
view at the top of
the page shows the
Italian summer-
house with its
flanking pergolas,
the whole a fit set-
ting for the pool.
The aquatic plant-
ing has been kept
trim, that the
water itself may
fulfill its mission
as mirror of the
sky, the clouds and
the surroundings*

AN ORCHARD THAT IS A GARDEN TOO

*On the Place of Egerton
L. Winthrop, at*

SYOSSET, L. I.

DELANO & ALDRICH
Architects

*A border of brilliant
blooms has been planted
along the edge of the series
of little gardens from
which flowers are con-
stantly being plucked, to
decorate the house. The
turf is kept clipped*



*Formality and gracious-
ness are cleverly com-
bined in the little rose
garden with its close
clipped box outlining the
beds. A small marble
statue surrounded by roses
marks the centre*





A HILLSIDE GARDEN IN MASSACHUSETTS

The original garden site was a steeply sloping meadow. This was broken by walls and the terraces graded down. The walls gave a background for beds of hardy perennials. The steps are accented by English boxwood trees. Water plants grow in the long pool. From the verandah one looks down into the garden as into a bowl of flowers. This is on the estate of Barton Crocker, Fitchburg, Massachusetts, of which Prentice Sanger was the landscape architect.



From one end of the pool runs a pergola with an old apple tree overhanging the water and casting its shade on the glimmering surface. An apple tree in a Greek garden! Let's see—in one of her fragments, doesn't Sappho speak of an apple tree and the golden fruit that was always too high to reach?

Down the midst of the garden runs a shallow canal bordered by arborvitae and specimen cedars and low-growing evergreens. At the farther end is the Greek theatre flanked by tall columns bearing lordly sphinxes that were executed by Paul Manship. The wall enclosing the grounds is crowned with hard-outlined battlements such as Troy might have known

THE GREEK GARDEN *on* THE ESTATE *of* SAMUEL UNTERMYER

GREYSTONE, NEW YORK

WELLES BOSWORTH, *Architect*

Standing at the edge of the upper terrace and overlooking the swimming pool is a Greek temple of marble Corinthian columns and a circular entablature open to the sky. It is executed in Alabama marble. The whole garden answers the poet's question, "Why Go To Greece?"





Against solid walls of dark yew have been grown specimen statues carved in juniper. This forms the termination of the canal, and is placed in such a relationship to the water that the sombre coloring of the yew is intensified, and the light tones of the juniper made still more lovely. The garden was designed by Mr. Romaine-Walker

AN ENGLISH TOPIARY GARDEN

*In a Slight Thirty Years This Garden Has Been Grown —
It Rivals Some of the Most Ancient Gardens of England*

HALF-WAY between the formal, architectural garden of Le Notre, the garden of which Versailles is the splendid model, and the so-called "English" garden, with its less geometrical pattern and its absence of architecture, stands the topiary or sheared garden.

The builder and the architect had as great a hand in the making of a formal garden as the horticulturist. Terraces, statues, walls, and arches were more important in these elaborate creations than growing plants.

The topiarist makes the best of both worlds. He is both builder and architect, but the materials he uses are living trees instead of inanimate stone.

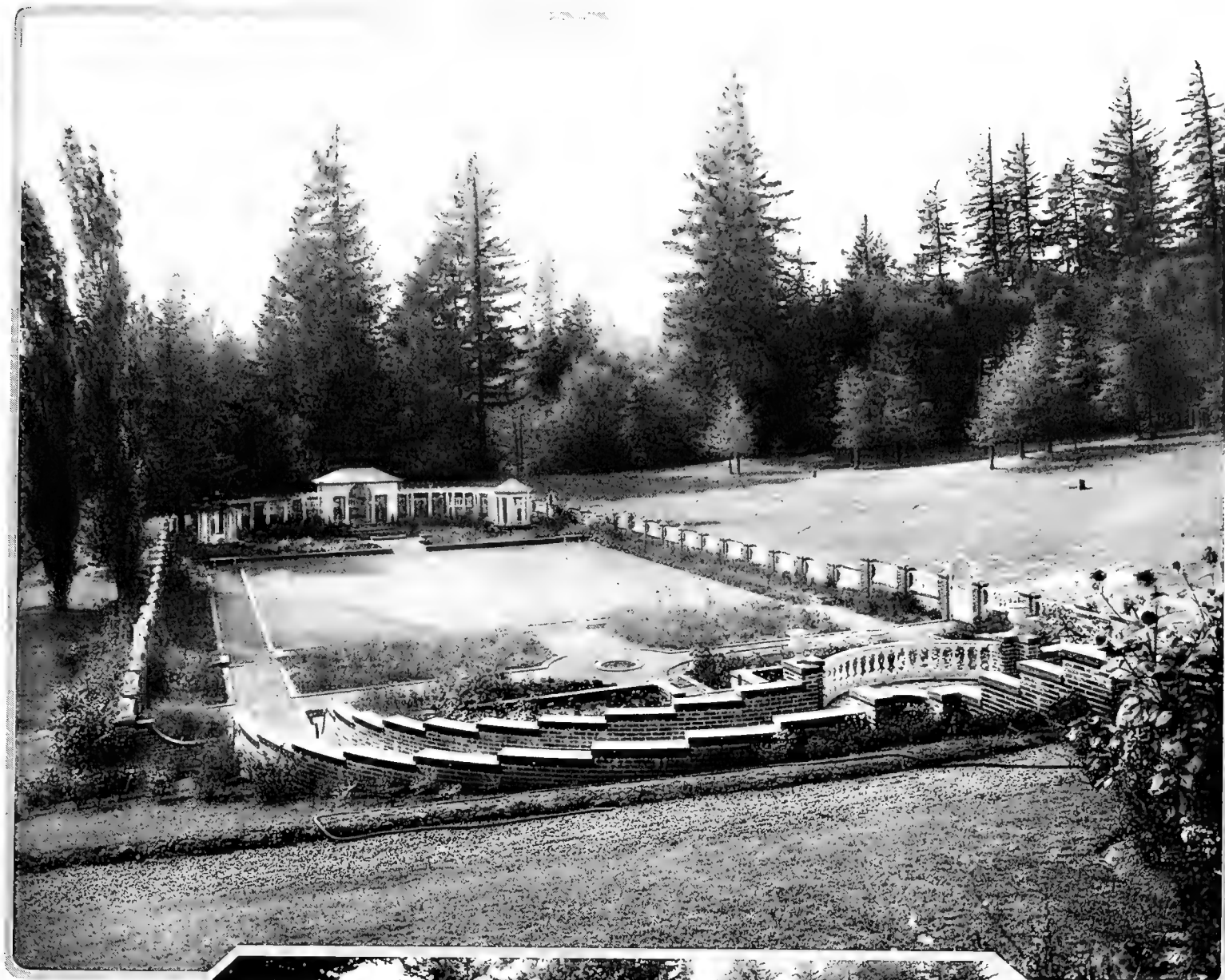
Where the ordinary gardener must necessa-



On a dry, arid bank is a thick plantation of laurels, clipped to an even surface, while at the top come the finer foliage and forms of yew. The way leads by these stone steps from the forest up to the level open stretches of the garden

rily work in irregular broken masses, the topiarist can employ straight lines, plane surfaces and all the forms of solid geometry. At the same time his green masonry has this advantage over the architect's stonework, that it is alive and diversified by the innumerable intricate details of a living organism. A flat surface that is composed of countless little leaves is more interesting, richer in quality than the flat surface of a stone in laying out, etc.

In laying out this topiary garden the designer has made some interesting experiments in color variation—yew, juniper, Irish yew, laurel, golden yew, box, and ivy have been mingled so as to relieve the unvaried sombreness of the plain yew hedge.



The garden at "Glenwood," home of Mrs. T. B. Wilcox, near Portland, Oregon, is laid out in a meadow with towering fir trees for a background. A wall of red brick surmounted by a white balustrade encloses the garden. The borders are planted with perennials.



Half encircled by the curved pergola and protected by the surrounding woods, is the lily pond. In this climate of Oregon only a few weeks intervene between the last blooms in December and the early flowers which open in February. The water in the lily pond is rarely frozen.

A WALLED GARDEN IN THE NORTHWEST

L. M. THIELEN, *Landscape Architect*



THE TWO GARDENS

There are, in any case, two gardens—the garden in full sunlight, when every flower and tree limb silhouettes distinctly, and the wreathed garden seen in the white mists of dawn, the mists of dusk or late on summer nights patterned over with silver from the moon. For the beauty of color watch the garden in sunlight; for the beauty of subtle tones and

delicate atmosphere study the wreathed garden. Such is this view in the garden at the home of Herbert N. Straus, Red Bank, New Jersey, showing a glimpse of the broad stone step leading up to the tree-shadowed terrace. The landscape architect was Martha Brookes Hutcheson and the associate architect F. Burrall Hoffman, Jr.



These four views are of an English walled garden, a garden set on a hill exposed to winds that made walls a necessity. The garden is on the place of Mr. Thackeray Turner, near Godalming, Surrey

AN ENGLISH WALLED GARDEN

(Below) From the seat in this sunny recess in the wall one can see through an arch into the garden behind. This arched niche promises a windless spot where one could sit in cold weather



When the sun becomes overpowering one may retire to a little stone porch that makes a cool oasis in the midday heat. Contrasted with its shadowed darkness is the blaze of Shirley poppies



A garden architecture that shall seem a natural outflowing of the earth is the ideal of Mr. Turner's school of landscaping. These walls are of rough-hewn stone fledged with plants



Fortunate is the gardener who can include water in the planting picture, even though it be but a glimpse, as here, through an opening among trees



A GARDEN NEAR
WATER. THE PLACE
of
J. KENNEDY TOD

SOUND BEACH, CONN.

MARIAN C. COFFIN
Landscape Architect

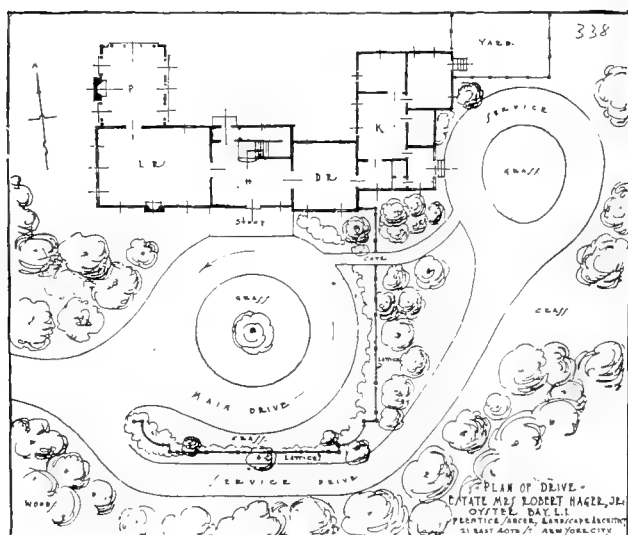
Madonna lilies and Japanese iris are grouped side by side in the beds around the turf circle. Boxwood is used throughout to outline the beds



On this place, the estate of Mrs. Robert Hager, Jr., the problem was to plot the drives and planting so that the service end of the house, which is on a lower level, could be easily reached. A latticed forecourt solved the problem

A LATTICED FORECOURT
AT OYSTER BAY, L. I.

PRENTICE SANGER, *Landscape Architect*



The house stands on the brow of a hill and behind it the land drops about 6' below the level of the forecourt. This accounts for the contour of the drives and the arrangement of planting

A direct route from the front drive to the service door is gained by a path that leads through an arched gate. This is a charming glimpse of the gate and its attendant shrubbery.



The foliage of trees forms a background to the brick wall, which encloses the formal garden with its pool mirroring the branches and sky, its stretches of turf and flagged walks. It is an ornate creation in a rugged setting—each the richer by the contrast

A WALLED GARDEN SET IN THE WOODS

*On the Place of Henry G. Lapham, Esq., at Brookline, Mass., Has Been
Made a Formal Garden of Great Distinction*

THIS garden was designed to serve as an adjunct to the house. The problem was a difficult one for the reason that the main grounds were purposely left in a natural state, the only artificial element being the garden proper.

This is surrounded by a brick wall at the rear of which is a natural park where fine trees and shrubs with effective ground cover are planted to good advantage and where many wild flowers are encouraged to grow and blossom. The background of trees brings out to advantage the brick wall with its topping of mement and proves an effectual wind-break.

Leaving the house proper, one treads a stretch of soft green turf, which is the central feature of the upper garden. This follows the gradual slope of the land and is surrounded by by-paths that lead down to broad steps. Boxes filled with yellow pansies, vincas and purple pansies stand at regular intervals.

The planting is especially interesting. It is mainly evergreen and includes spruces, hem-

locks, junipers, dwarf evergreens, cactus and Japanese pines, together with broad leaf evergreens such as rhododendrons and leucothoes, with good ground covers planted beneath. There are pansies, blue, yellow and white, and violets, mingling with some of the native lilies.

The Garden Proper

This prepares us for the garden proper, which is laid out like a great painting on the landscape. Passing down the step we enter a wide flag walk with the grass growing between the stones. Along the terrace wall, dividing the two sections of flowers, are lilies, double hollyhocks, iris, lupins, asters, single sunflowers and monkshood, as well as evergreens, deciduous trees and Japanese maples, most of which are planted for winter effect.

An oval pool has been placed in the center of the design. To break its severity, there have been introduced baskets of fruit. Vases and stone lions are introduced on the rim. Low benches stand conveniently nearby, and beyond

is the exedra of the curving garden wall.

At the left and right of the pool are rectangular flower beds with small borders of Japanese barberry, and at the extreme right in the upper corner, is an attractive little tea-house, or gazebo. Another summer-house is found on the right of the garden wall.

The beds at the left of the water garden are planted for a succession of bloom, and although this is essentially an early summer plot, yet there are blossoms until frost. Pansies, violets, iris, peonies, marigolds and snapdragons, together with baby's-breath and monkshood, have been planted here. Against the wall are fine specimens of buddleia. As an edging plant pachysandra has been used, and sedum chosen to outline the lower wall.

Near the gate that leads out to the surrounding ground hollyhocks have been planted for color accents, while vincas, pansies and baby's-breath grow in and around the barberry hedge. Near the house and outside the wall are massed plantings of hardy shrubs.



From the house the garden stretches out in its broad areas of turf and border planting with well-kept walks and statuary set at regular intervals to act as accents



Along one of the side walks is a little roofed rest house hid away in a profusion of flowers. Here one can take shelter from the hot sun or a sudden shower



The decorative value of vines against a wall of dazzling whiteness is shown in this garden of Mrs. John C. Phillips at Beverly, Mass. They hang in profusion over the balustrade and clamber up from the border of perennials, making a charming background for the quaint old statue of St. Francis that surmounts the bird bath and fountain.

Most successful is the arrangement of this garden vista. The dark background of luxuriant trees, the rich beauty of the perennial borders, the accentuating potted hydrangeas, all lead up to and enhance the delicate grace of the little Diana at the end of the path. This is a bit of the garden on Mrs. Gordon Abbott's estate at Manchester, Mass.



It's a far cry from the humble "swimmin' hole" of bygone days to this regal pool set amid the formal beauty of gravelled walks and far-stretching lawns and surrounded by majestic trees that cast their shadows in its mirrored depths. The effect is one of unusual simplicity and dignity. It is on the estate of Mrs. Gordon Dexter, Beverly, Mass.

AN INTERESTING GROUP OF NORTH SHORE GARDENS

This might be the corner of some garden in Italy. Italian is the wall fountain of white marble, exquisitely carved and effectively placed in a setting of contrasting brick. The marble balustrade and graceful urns, also reminiscent of Italy, have for a background, most Italian of all, the imposing beauty of Lombardy poplars. Mrs. Frank P. Frazier's garden, Manchester, Mass.



IN THE
GARDEN of
MRS. F. L
VARING
PASADENA,
CAL.

MYRON T. HUNT
Architect



(Left) An old-world charm hovers about the garden where lofty Italian cypresses majestically lead the way up the brick steps to the balustraded terrace which surrounds the house



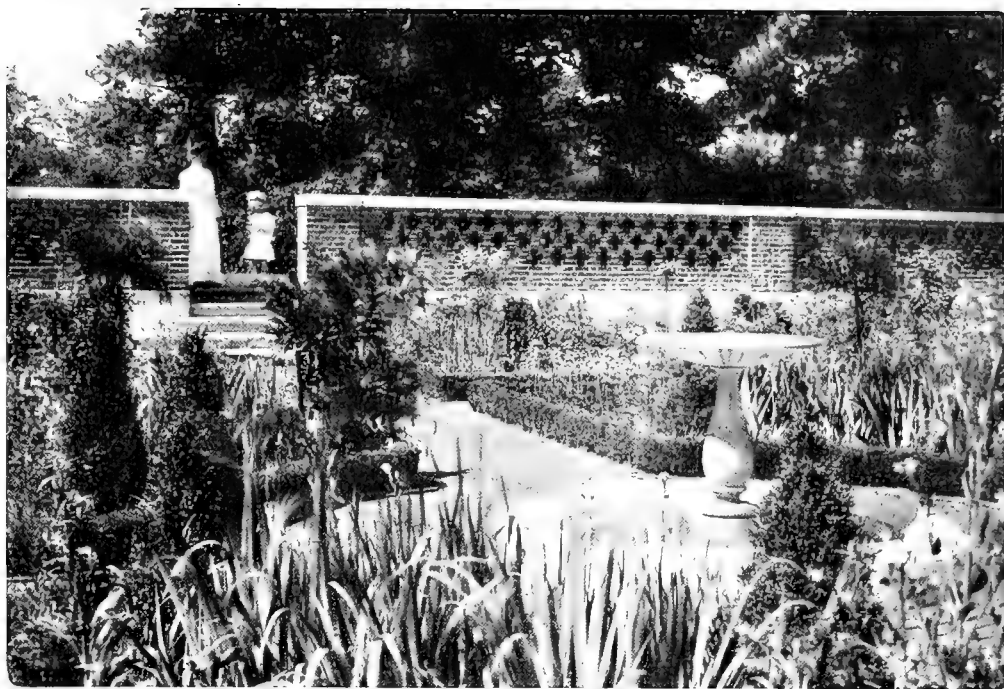
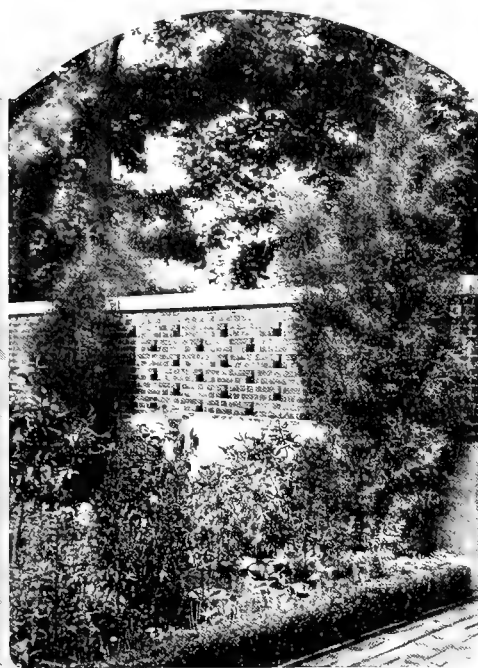
In the moonlight, of course, dryads trip down these long Italian steps: the "arroyo seco" below, where they sport amid the live-oaks that line the banks and rest upon the lovely woodland seats which mortal hands have with forethought placed for them



At the other end of the house, one is lured on by the sweetness of climbing roses to walk through the beautiful pergola between rows of box-plants, and find at the end that one has come to the formal flower gardens, beyond which lies a sparkling pool

IN THE GARDEN OF
JAMES PARMELEE, *Esq.*
WASHINGTON, D. C.

CHARLES A. PLATT, *Architect*
Mrs. ELLEN SHIPMAN, *Landscape Architect*



The feathery foliage of arborvitae and the richer green of boxwood edging stand out in marked contrast to the lines and color of the brick and cement wall

Approaching the garden from the side, five steps lead down from the higher ground. From them the axial walk leads to a pool and fountain in the center

Save for the rough flagged smaller pathways, it is a brick walked and brick walled garden. Pleasantly relieving shadows are cast by the projecting bricks in the wall, which are regularly arranged





Nothing disturbs the dignity of space in the view from the terrace, and this simplicity of treatment makes it all the more impressive. Graceful swans swim lazily on the long pools, and the close-clipped hedges and the tall trees beyond give a sense of unreality to the picture, so perfect is the setting.

(Below) At the end of the poplar walk, there is a rose garden with a circular pool and a fountain, exactly as it should be. Sweet-smelling box outlines the beds, and pungent eucalyptus trees border the grounds, giving an atmosphere of seclusion and creating a graceful background.

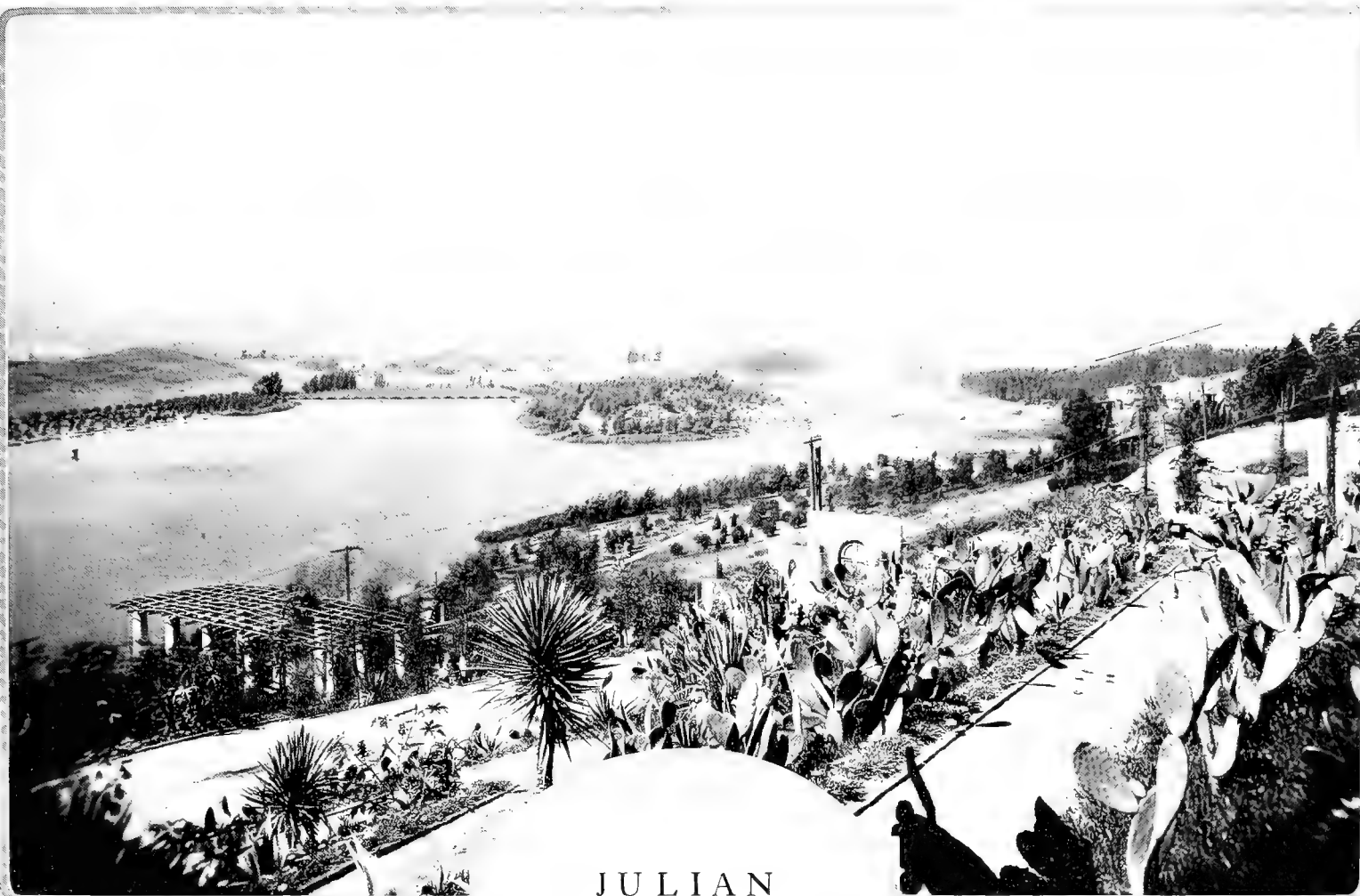


Charming in the sunshine that filters through the trees by day and a place of veritable enchantment in the moonlight is this architectural bit of the garden with its interesting statuary and its balustrades.



SERENE ENCHANTMENT
REIGNS in the GARDEN of MR.
GEORGE A. NEWHALL at HILLS-
BOROUGH, CALIFORNIA

LEWIS P. HOBART
Landscape Architect

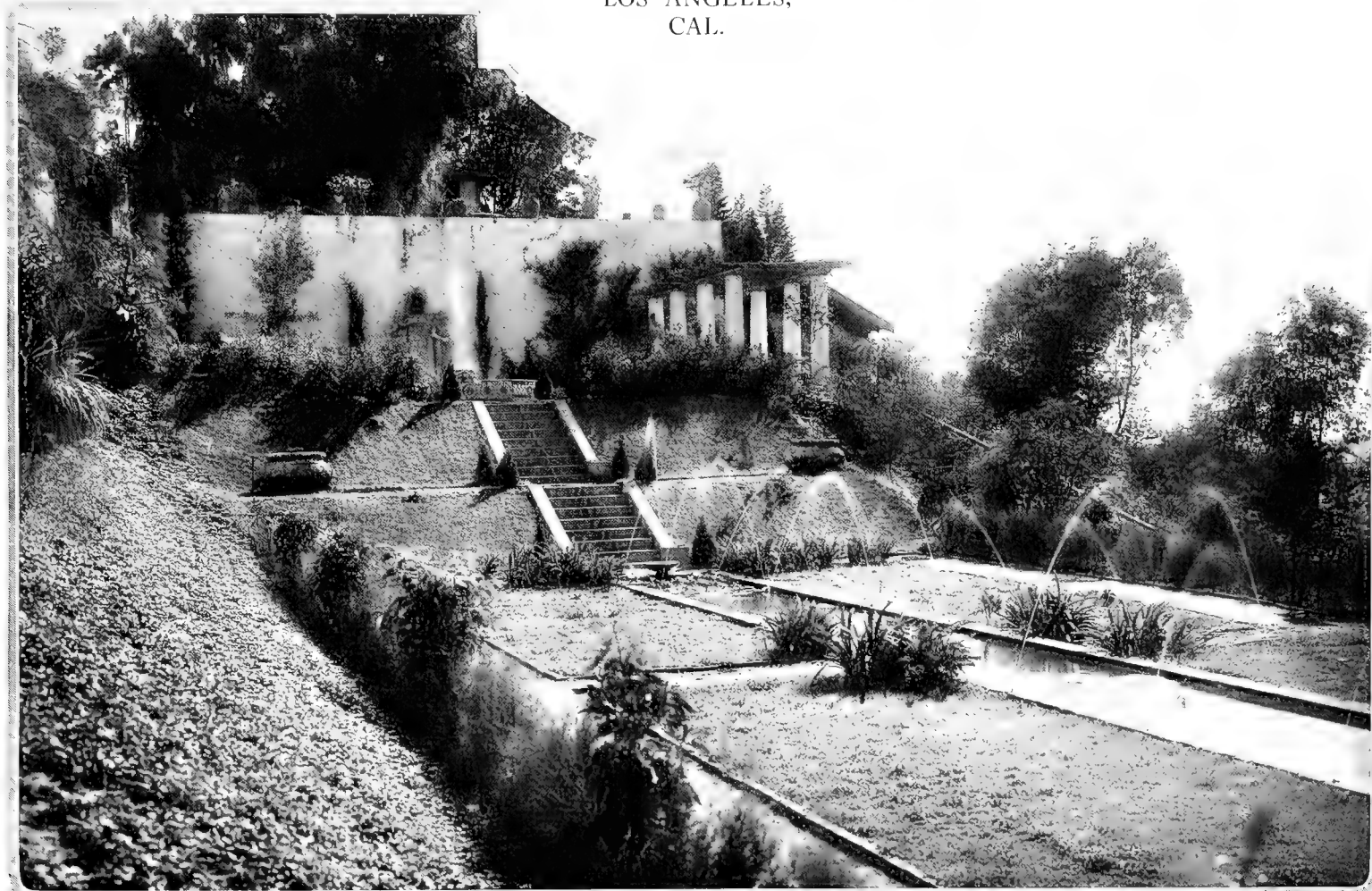


It looks down upon a mighty panorama framed by the Sierra Madre Range. Silver Lake stretches below. Charles G. Adams, landscape architect

JULIAN ELTINGE'S GARDEN

LOS ANGELES,
CAL.

So precipitous is the site that the grounds resolve themselves into seven gardens of individual atmosphere, on seven connecting different levels





From the orchard one looks toward the lemon house through whose arched passageway is a glimpse of the garden beyond. The lemon house forms the south boundary of the garden and gives ample protection to the shade-loving plants which are growing in its lee



The view across the garden from southeast to northwest shows two of the accenting palmetto trees and a corner of the villa beyond. The arrangement might be called informally formal



Though it is not a part of the garden, the view from the north doorway of the villa through a gap in the hedge to the valley of the Arno is a noteworthy feature of the place

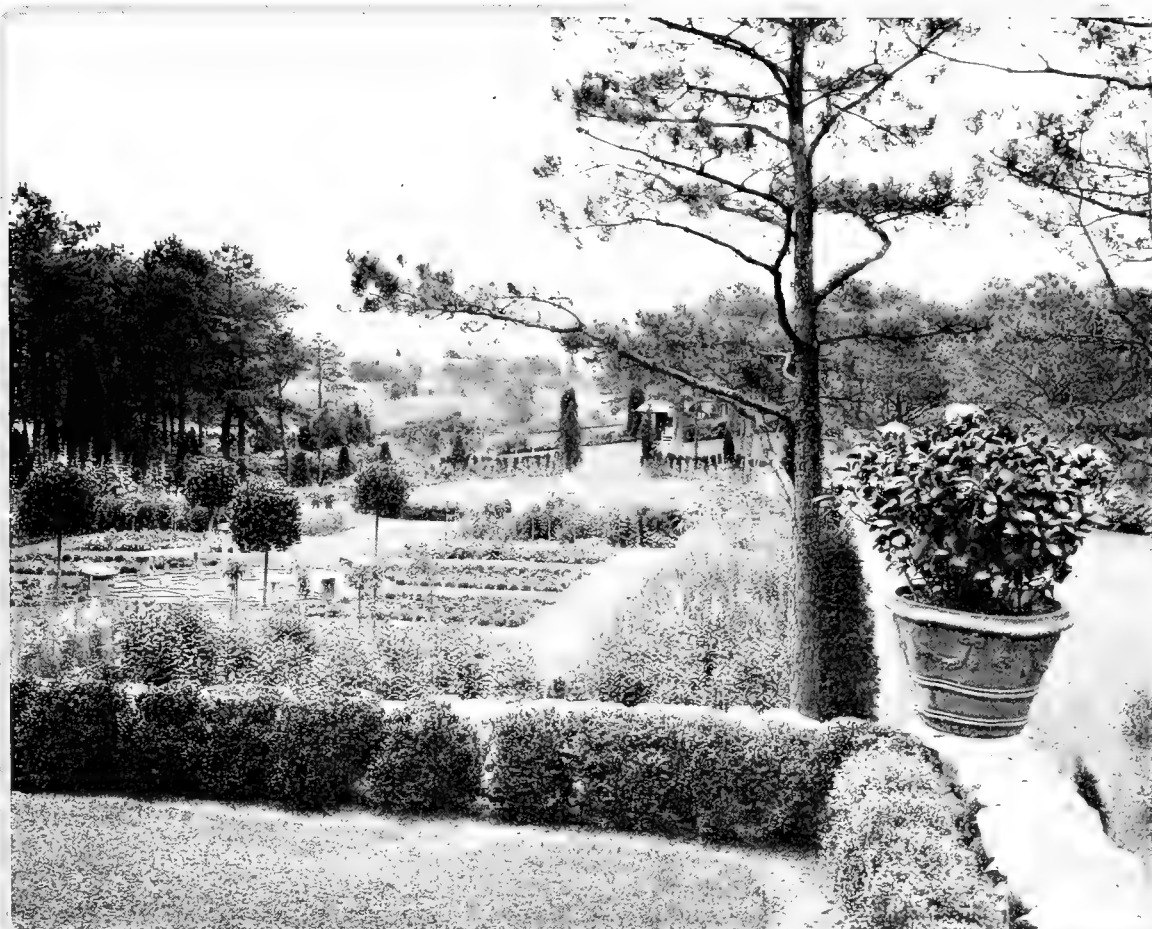


At the intersection of the main axes is a little well with a stone curb and iron railing. Beyond are the arch of the lemon house and the walk which leads into the orchard

THE GARDEN OF THE
VILLA SAN MARTINO
NEAR FLORENCE,
ITALY

A NEW ENGLAND GARDEN BY THE SEA

Below the retaining wall with its sheared privet hedge are the clipped turf walks and formal flower beds bright with delphinium, lilies, phlox and many other plants. A thick hedge of arbutus surrounds the whole and, with the trees, forms an effective background



In front of the house a long stretch of ground has been converted into a formal garden. A Druid feeling is given by an old wooden sundial set in a circle of turquoise and flame slate flags, with curved stone benches and bay trees on either hand in symmetrical arrangement





FOR THE GOOD OF HIS BODY

For the good of his body and the cleansing of his soul every man should go into a beautiful garden at least once each year. He should let its beauties seep through his pores, its scents sooth his nerves and its vistas re-focus his vision. Let him sit still in such a garden for an afternoon, and he will come back clear of eye, laughing, contented, at peace with

himself and the world. Such a garden is this, which is at Ashbery, Mass., the home of Mrs. J. P. Lyons. Here are lawns patterned with the shadows of great trees; here are paths winding between masses of colorful blooms; here is a white-balustered terrace under the shade of friendly trees. Here also is a Presence greater than man



Levick

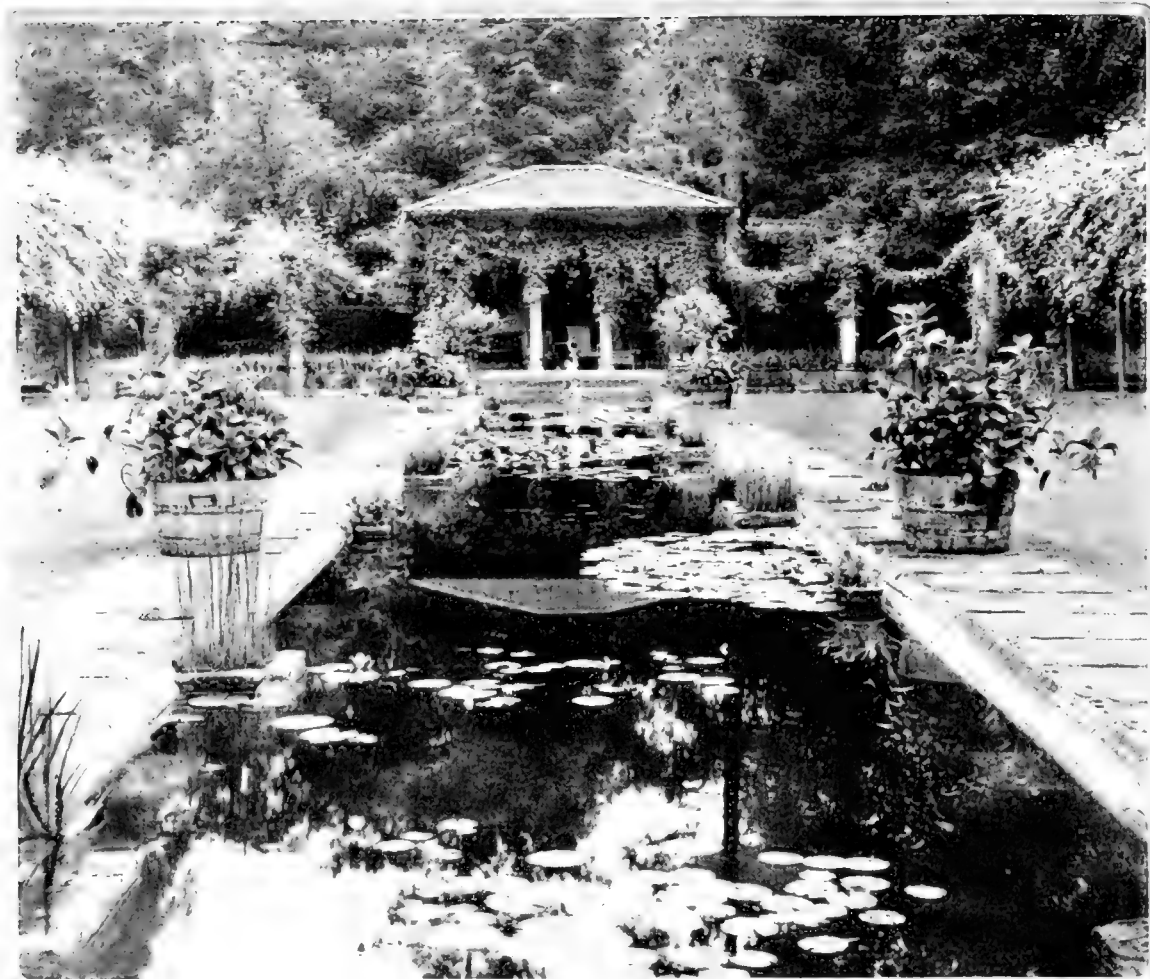
(Above) That one of the series of pools which lies nearest the little guest cottage is about three feet deep and is stocked with trout. Above it is a lily pool, and below has been built a deeper and larger one for swimming. The boulder garden and cottage are part of the property of Mrs. Emma Flower Taylor, of Watertown, N. Y.



(Left) The main staircase of the garden, where the rock-work shows to splendid advantage. The landscaping is all in accordance with the geological characteristics of the surrounding country, the stones themselves being markedly stratified and including some specimens of very old Azoic rock. Little planting is used here

A GUEST HOUSE and a BOULDER GARDEN

W. MAREDYDD HARRISON
Landscape Architect



(Above) The water-garden at Bridge House, Weybridge, the residence of Mrs. Trocer, is a canal ending in an Italian tea-house flanked with creeper-clad columns. Water-lilies, kept well within bounds, enrich the reflections in its clear depths. Designed by Mr. Harold Peto



(Left) At the end of the lower terrace in Mr. Prince Smith's garden at Whinburn, Keighley, lies this pool. White Valerian grows in the dry bank, but nothing breaks the calm surface of the water save two sparse clumps of reeds. Designed by Mr. O. Maxwell Ayrton

The arch forming the inlet to the water parterre, in the illustration below this, is built in dry stone. The treatment of the curb, which is edged with flag-stones, should be noted, since it avoids a too sharp edge in an ingenious manner

The water parterre which runs the entire length of the centre terrace at Whinburn, Keighley, is of unusual and interesting design. Iris reeds grow within its narrow borders, and foxgloves hide the top of the dry built-in wall of the terrace



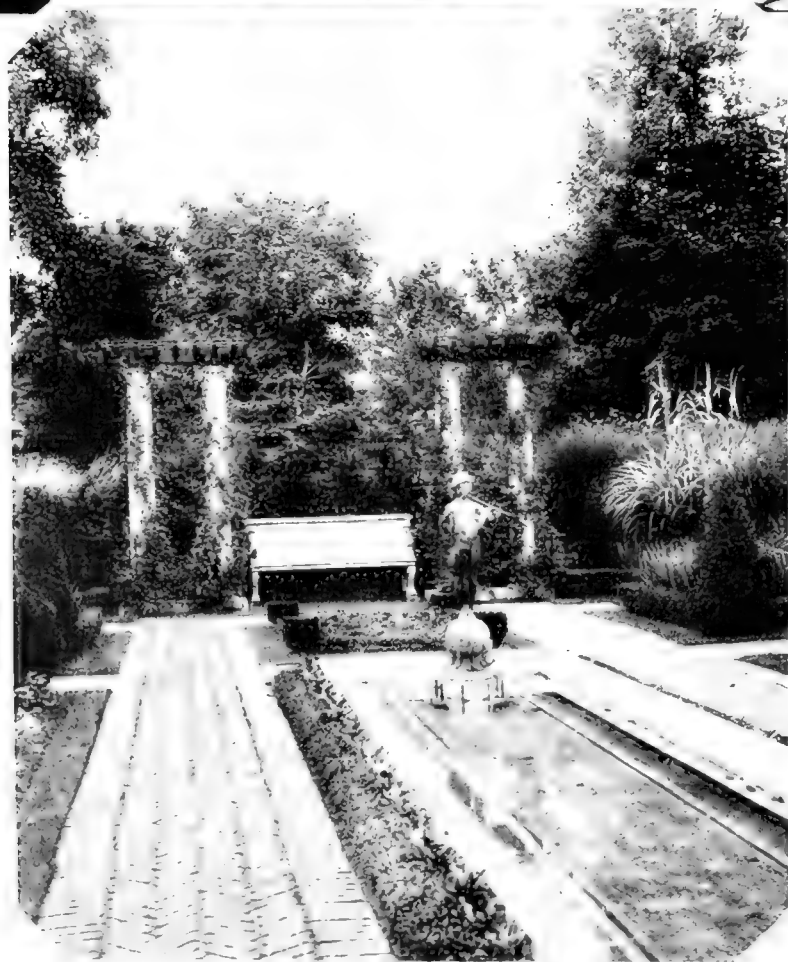


(Below) The octagonal pool in the centre of this sunk garden is a striking contrast to the formal design above. Funkias, muscanthus, and other reeds grow in opulent masses round its borders. This garden is at the residence of Mr. Thackeray Turner, Westbrook, Godalming

WATER IN ENGLISH GARDENS

(Above) This formal enclosed garden at Westwood St. Dunstan's, Mayfield, Sussex, is a welcome escape from the restlessness of the hillside landscape. Clipped yews emphasize its long lines, and a cock guards the entrance. The ornamental vases are from a design by Christopher Wren





For the purpose of screening a tennis court on the adjoining property, a section of the north garden was given a pergola background. It is painted gray green. The brick walks are bordered with box and the flowers are, for the most part, annuals—snapdragons, larkspur, phlox and such. On the outside are small evergreens and a dense growing arborvitae hedge.

THE GARDEN of H. G. DALTON

CLEVELAND, OHIO

ABRAM GARFIELD
Architect

Beds of roses are at this end of the garden, with peonies on the sides and arborvitae. The marble seat and four columns that form the exedra of the garden were brought from Florence. Ramblers are trained over them. Behind these columns arborvitae forms a thick hedge shielding the garden from the street.

THE YEAR'S WORK

Including The Gardener's Calendar, Planting Tables, Spraying Charts, and The Procedure for Making and Maintaining Gardens



BUILDING the GARDEN

Making Sure of Results by Laying a Firm Foundation—A General Summary of Important Details

ALTHOUGH the beginner at gardening may not realize it, the making of a garden is not unlike the building of a house: good materials are essential, but the ultimate results hinge upon making the foundation right. Good seeds and a good plan for the arrangement of the different crops are, of course, important; but alone they do not by any means assure satisfactory results. Years of practical experience, or else the closest attention to every detail of preparation and planting, are necessary to give the garden a strong start toward real success.

The preliminary work—what to do to the soil to make it capable of producing big crops—is the first essential. The next problem is how to set about getting these big crops out of the soil. With this part of the foundation of our garden building laid, what comes next?

To make the whole matter as plain as possible for the uninitiated, let us take up the matter of soil preparation and planting not in a general way, but in detail, item by item in proper order.

Let us assume, therefore, that the garden has been plowed and harrowed and thoroughly enriched with manure or fertilizer, or with both. Possibly there has been a long, beating rain which has made the surface compact and hard again; or a few days of wind and sun that have left it crusted and baked on the surface.

The very first step is to prepare, for receiving the seed, as much of the garden as we expect to plant at the first sowing.

This is quite a different operation from merely having the garden plowed and harrowed or spaded up—as different as putting on the ceiling boards or laths and plaster is from putting up the rough studding that is to support them. Perhaps our planting instructions say to “rake the soil off nice and smooth with a garden rake”; but if the soil has lain for some days in a beating rain or in bright sunshine after plowing and harrowing, ordinary raking will have very little effect upon it.

Get out the wheel-hoe and put on the plain, vertical cultivator teeth—all of them, and evenly spaced. With this you can make a cut 1' to 1½' wide. Mark off roughly the part of the garden you are ready to plant and go over it with the wheel-hoe, a strip at a time, until the entire surface is loosened up. It will be pretty stiff work, but not nearly as hard as trying to do it with a rake, and you will accomplish several times more. If your garden is so small that you have not a wheel-hoe, then you should get one of the adjustable cultivator-tooth rakes or hoes which are now on the market. These, of course, have no wheels, and are pulled instead of being pushed like a wheel-hoe. But they will do good work, although not quite as fast or as easily as a wheel-hoe. You should have one or the other.

Whatever the tool used, the object is to get the surface thoroughly loosened up again to a depth of several inches. If no other tool is available, you may have to do it with an ordinary hoe or with the spading fork.

When this work has been done, we are ready to use the rake. And the next thing for the beginner to learn is that this implement is



Lime will benefit almost all garden soils, and is essential for those which are acid



A garden fork is the best implement for spreading manure. This is the way to use it



See that the manure is scattered evenly over the ground to be fertilized, before digging it in



A fork is used to break the earth lumps



How to hold a rake for smoothing the soil preparatory to planting

Get the weight of your body as well as foot to work when spading



Label each row of seeds when you plant it, and use a measuring stick for regularity

To make a “drill” for beets, parsnips, etc., turn the hoe blade on end

Small seeds like carrots need a shallow drill, made with a pointed stick



not to be used in the same manner as it would be in raking grass.

In the latter case, the object is to rake up everything there is on the surface of the ground; in the garden, to rake up as little as possible. In preparing the garden, the rake is used primarily for leveling the surface, and only incidentally for gathering up such pieces of manure, small stones, plant stems and other useless rubbish as may be on the very surface of the ground. The rake, then, should be used with a backward-and-forward motion to level down all ridges and fill up hollows, and lightly remove any loose trash from the surface, leaving a perfectly level, fine, moist strip of ground ready to receive the seed.

The next step is to mark off the first row. Don't just go ahead and guess at it. It will probably not take over ten minutes at the most to get it perfectly straight and parallel with or at right angles to the edge of your garden or the side of the house or the sidewalk—whichever is the most natural line to go by in laying out your garden. That first row will determine the general appearance of the entire garden; make it straight and true.

If you have a right angle to make, here is a simple method of determining whether you have it exact or not. Measure off 6' from the corner along one line, and 8' from the corner along the other. If it is a true right angle, the diagonal between the two points should measure exactly 10'. If it does not, you can adjust one side or the other until the angle in question is a true one.

The actual getting of the seed into the soil is the next thing to be done. There are four distinct kinds of planting: in drills, in rows, in hills, and transplanting or setting out plants which have been started from seed sown indoors or in the hotbed.

"Drills" are plants grown in a continuous row so close together that no effort is made to have them at regular distances, or to cultivate between the individual plants. Radishes, spinach and many other things familiar to everyone are grown by this method. "Rows" signify that the plants are set at regular distances apart, but so close together that cultivation is done only in one direction, except for the use of the hand hoe or rake. Cabbages, peppers and potatoes are familiar examples of vegetables grown in rows. By "hills" is meant the setting of the vegetables so far apart in both directions that cultivation is given both ways, and each group of plants or "hill" is treated as an individual unit. Familiar examples of vegetables grown in this way are melons, sweet corn and pole beans.

Most of the vegetables planted in drills are root crops and do not need very much space between the rows. If the soil is poor, a handful of ground bone along the bottom of each 20' of drill is advisable.

A thorough manuring and fertilizing of the whole area planted is worth while before sowing vegetables in rows, with a little extra where each plant is to be. Hills are usually enriched as units. The soil in them should be especially prepared for a space of 18" to 24" across and 6" or more deep.

All this preliminary work with the soil has a definite bearing on the size, quality and general development of the vegetable crop. As to the dates and depths of planting, the quantities of seed for given spaces, and other specific details about the various things ordinarily grown in the home garden, a tabulation will be found in the vegetable guide on another page of this book.



Onion sets are planted in drills. Put them about 2" apart in the row



A wide drill, as for peas, is made with the hoe blade held flat

Sow small seed direct from the hand, held close to the drill

Cover the wide drill from both sides, pushing in the soil with the feet



Cover the first planting of peas about 1" deep, in a wide drill

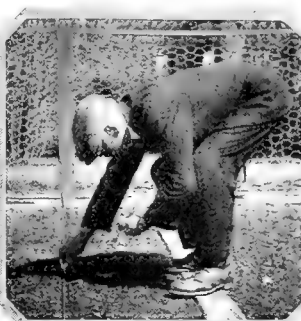
The back of a wooden rake is excellent for covering shallow drills

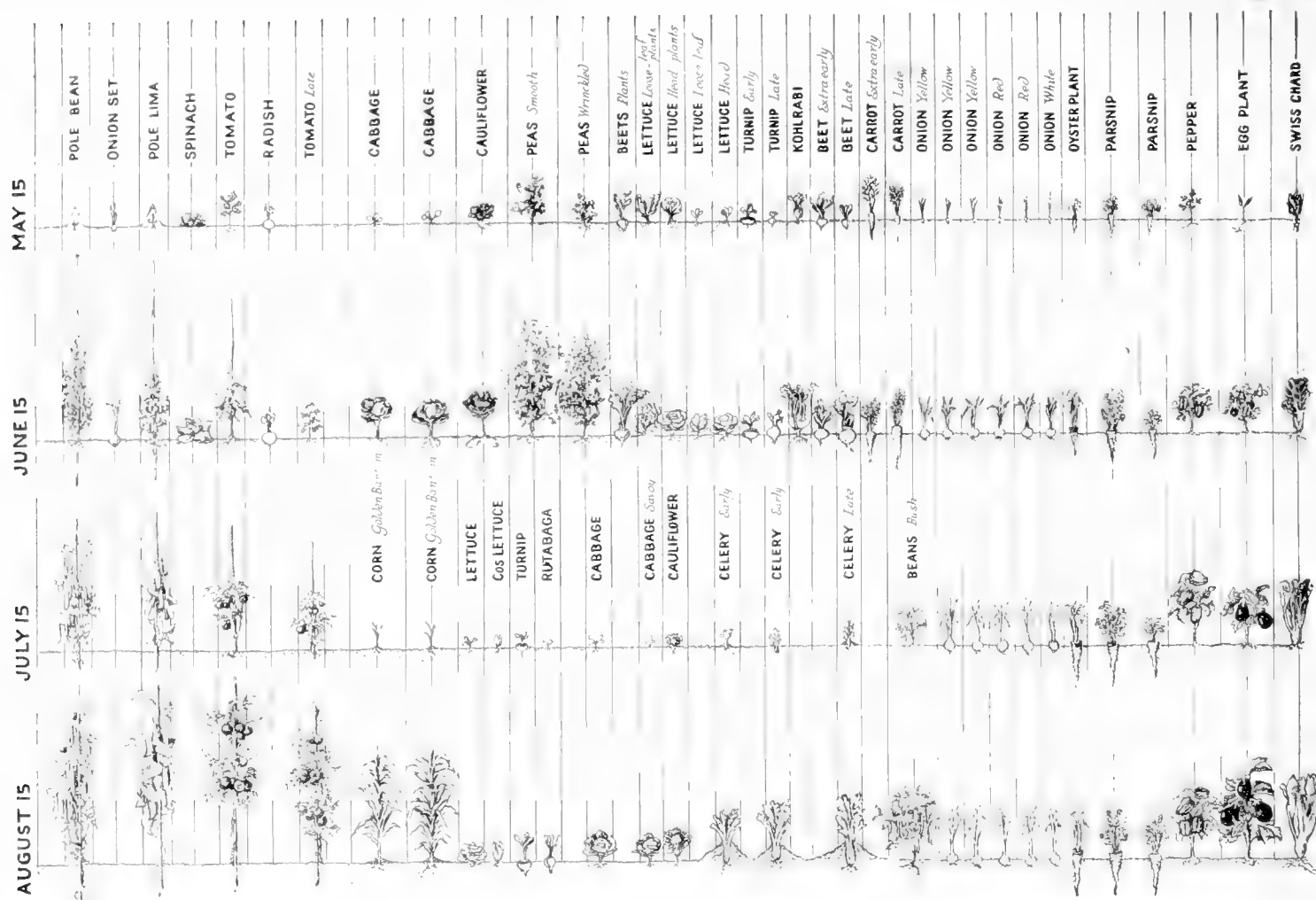
Then turn the rake as shown at the right, to firm down the soil

Use a wooden rake for the final smoothing of soil before sowing



(Below) Use a board to stand on, so as not to make tracks in the soil





The first 50' of the planted area, in which the short season crops are so arranged that when they are harvested their places will be taken by plantings of others. The grouping of the pole beans, corn and tomatoes at one end eliminates the hindrance which their shade would be were it to fall on the smaller growing vegetables

THE FOUR STAGES of the GARDEN

A Graphic Portrayal of What Cross Sections of the Vegetable Area Should Be at Monthly Intervals During the Active Growing Season

VISUALIZING a whole vegetable garden is no easy task—real visualizing, that is, in which a worm's-eye as well as a bird's-eye view of each and all the rows is presented. Difficult as is the undertaking, however, it must be attempted if you would have a garden of one hundred per cent productiveness, for the simple reason that all of the ground must be kept working all of the time. There must be no waste of either time or space. To accomplish this a knowledge of each row's condition throughout the season is essential; hence the necessity for visualizing.

All this may seem an unnecessary sort of exploitation of orderliness, but those who have had much experience in gardening know the dire consequences of trying to raise vegetables on a hit-or-miss plan. Not only does the disordered garden spell small yields and waste of seed as well as space, but its very disarray puts a premium on neglect. One cannot take much pride in a tangle of beans, carrots and corn interlaced with pea vines and weeds, nor gather full crops from its jungle depths. Disease and insect pests flourish unchecked in such a garden, too often extending their depredations to the neighbor's domain across the fence and causing him unwarranted loss.

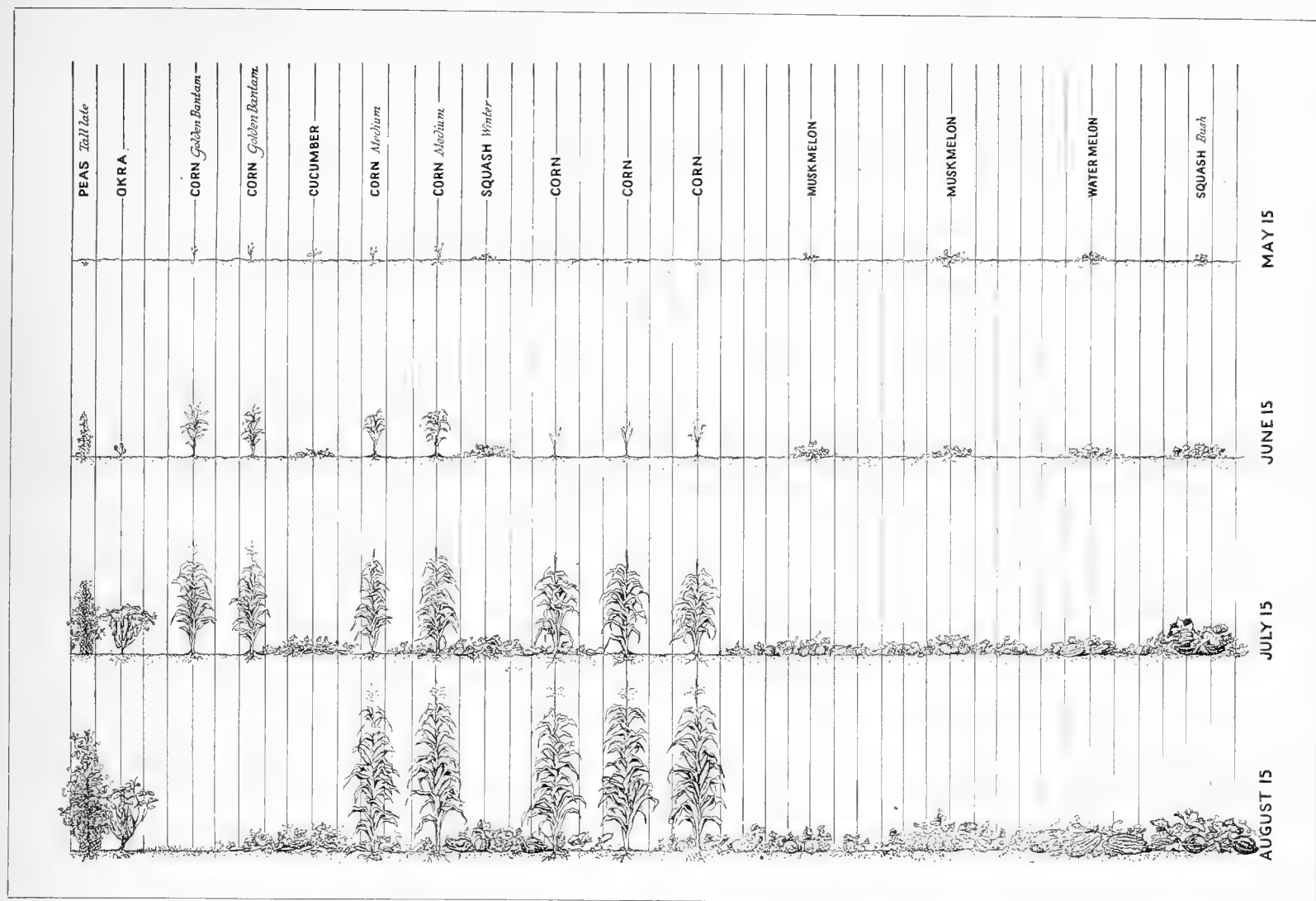
In depicting garden layouts the usual method is to show a ground plan of the arrangement as it appears from above. However detailed and explanatory such plans may be they are not really graphic—they lack the worm's-eye perspective. In an attempt to overcome their deficiencies the garden chart shown here was developed.

Imagine, for the moment, that it is May 15th and that you are looking simultaneously at the topmost horizontal line of the chart on this page and down the rows of your vegetable garden-as-it-should-be. You are facing the south, with the east at your left and at your right the west, because the planted rows run north and south for the sake of an even distribution of sunlight through the day. Thus placed you can see only the first plant in each row, but others are beyond, extending in orderly lines for 50' or more like soldiers standing at attention in "company front."

Beginning at the left or east end of the garden, then, you notice that the first 18" of space (each of the vertical divisions of the chart represents 1') are unoccupied. Then comes the first row—pole bean seedlings under portable glass forcers, for the season is early yet and beans need heat. Another 18" to the west is a

row of onion sets, and next to it, at the same distance, the pole limas, also under glass. Spinach, young tomato plants and the rest follow in their order and at proper intervals as you follow the line to the west end of the garden, 100' away at the right side of page 95. The late peas and much of the main corn crop do not show above ground as yet, for they have just been planted. Throughout the whole 100' you will notice that the spacing of the rows depends upon such points as cultivation requirements, the size and habit of the mature plants, and the length of the period through which they occupy the ground.

One month later, on the line below, growth has correspondingly advanced. The first spinach, radishes, cabbage, cauliflower, peas, beets, lettuce, turnip, kohlrabi and carrots are ready for use, and within the next month their places will usually be taken either by succession plantings or sowings of late season crops. In the cases of the onion row between the pole beans and the limas, the spinach between the limas and the tomatoes, and the radishes between the two rows of tomatoes, the growth of the flanking vegetables is such that by July 15th it heavily shades the intervening spaces. For this reason intercrops are chosen which will



Above is the other half of the garden, adjoining that on the opposite page. Two and a half feet is the space represented between the Swiss chard row on that page and the line of tall late peas. The scale of feet is the same throughout both halves of the chart—1' to each of the vertical divisions

be out of the way before this shade becomes too dense.

Certain of the plants shown are, of course, started in "flats" or seed boxes, and transplanted later to the places they occupy on the plan. Among these are the tomatoes, radishes, cabbage, cauliflower and lettuce. The melons and squash particularly should have well enriched soil. A good method of handling them is to plant the seeds late in April where they are to grow, and cover them with portable glass-topped frames which will give them a higher temperature and can be removed as the weather grows warmer and the need for them gradually ceases.

The July 15th stage finds the garden yielding crops while at the same time twenty-odd feet are devoted to newly planted vegetables. These latter occupy the space which has been vacated by the cabbage, cauliflower, peas, early beets and carrots, lettuce and kohlrabi. Here is an example of succession planting, a principle whose intelligent application is essential to the garden of 100 per cent productivity. "Keeping the ground at work" connotes the maximum yield of vegetables, which can be obtained only by carefully planning for continuous succession.

By the middle of August the whole garden is carrying its full load, for the melons and other vine crops have so nearly attained their growth that they have spread over all the surface allotted to them. The development of the other rows is so clearly shown on the chart that it requires no further detailed explanation here.

A careful study of the allotment of space to the various vegetables will repay, because the distances between rows are the minimum which can exist in the successful garden. Where the available space is less limited, somewhat larger spaces may be permitted, though they will avail little except in making for greater ease in cultivation. In this connection it is well to remember that too wide spaces between the rows give an opportunity for weeds to develop which only extra cultivation of the ground can hold in check.

Another point to note is the grouping of most of the taller and more spreading crops at the ends of the garden, thus leaving the central portion for a concentration of smaller things. The chief reason for this is that the tall growers are mainly long-season crops which cast considerable shade in which lesser vegetables could not thrive. The grouping of the corn and melons results from the fact that these vegetables succeed well in close proximity to each other—in fact, the melons, cucumbers and squashes can overrun the corn rows without detriment to anything concerned.

No provision has been made for the small fruits, herbs or such things as asparagus, which require specially prepared soil in an area all to themselves. For reasons which need not be gone into here it is inadvisable to combine plantings of vegetables and cane fruits. The latter should constitute another garden, or else be used merely around the borders of the vegetable area where their roots will not interfere with the cultivation of the soil in which the

annual plants are growing. The same rule applies to fruit trees; and as for strawberries, they need a section quite their own. The space needed for the herbs, of course, is so limited that they may be planted almost anywhere around the edges where there is an unoccupied bit of ground.

Potatoes, it will be noted, have not been included in this hypothetical garden. While these vegetables are usually the first thing that the beginning gardener thinks of growing, they should by no means be his first actual choice in the majority of cases. Great as has been the popularity of potatoes, the fact remains that growing them has decided drawbacks. Failure to appreciate these has brought about innumerable disappointments, to say nothing of the waste of time, space and seed.

Potatoes cannot be simply planted in any old piece of ground and expected to grow properly. For one thing they need considerable room, as well as prompt and thorough cultivation at the right times. They are subject, also, to attacks by insects which will quite destroy the plants if spraying is postponed or done in a half-hearted sort of way. In certain seasons—sometimes apparently because of the weather, and at other times for no evident reason at all—the plants will be struck by blight which may seriously injure the crop if it does not actually destroy it. For the returns to be commensurate with the labor involved, soil and weather conditions must be right, and you must understand and be able to give the attention demanded.



Complete in two reels—the story of starting seeds, beginning with drainage



The soil is put in and firmed down with the bottom of a glass tumbler or measure



Then the seed is scattered on the surface direct from the containing envelope



The measure comes in again to press the seed lightly down into the soil surface

GIVING THE GARDEN A RUNNING START

Vegetable Seed Planting Indoors So As to Produce Thrifty Crops Two Weeks in Advance of the Ordinary Season

GRANTED a hotbed or a sunny window in the house in which to place them, the first essential in starting vegetable seeds especially early in the season is proper soil. It should be light and very finely pulverized so that the tiny roots can penetrate it readily. Special enrichment, however, is not necessary in fact, should be avoided.

Next come the "flats" or shallow boxes in which the soil is to be placed. These should be 2" or 3" deep, with holes protected by bits of broken crock in the bottom to provide for the escape of any surplus water which may work down through the soil. Whether the soil is put in flats, or directly in the hotbed, it should have under it a layer of some coarse, porous material like cinders or sphagnum moss, to make the drainage more quick and certain.

In filling the flats, care should be taken to press the soil in firmly. Then water it thoroughly, after which it should be left until dry enough to mark off on the surface with a small stick a number of very shallow rows about 2" apart for the seeds.

Seeds such as cabbage and lettuce should be covered only $\frac{1}{8}$ " deep; beets may go a little deeper; fine flower seeds should be gently pressed down into the soil surface and barely dusted over with soil.

For several days after planting the temperature where the flats are should not fall below 55° at night and 10° or so more during the day. This high temperature tends to dry the soil out quickly, so glass may be laid over the tops of the flats to conserve the moisture.

Once the little seedlings have broken ground,

they should have a few degrees lower temperature, abundant sunlight and plenty of fresh air. Every morning, unless there is a severe storm, the windows (or sash, if the flats are in a hotbed or coldframe) should be opened enough to give a complete change of air without subjecting the tiny plants to a cold draft. The temperature should never be above 70° or 80° for any length of time, and watering must be done with a very fine spray in the early forenoon of bright days.

Transplanting to other flats should be done when the second true leaves appear. The seedlings should be set 2" or 3" apart each way. Move them very carefully so as not to break their rootlets. Before they are set out in the open garden they must be gradually "hardened off" by giving more and more fresh, cool air.



Fine soil is then sifted on top so as to cover the seed completely from sight



Watering with a clean spray gun follows, the fine spray not disturbing the soil



When the seedlings reach transplanting size, they are moved with a flat stick



The first transplanting is into a flat which holds them while hardening-off

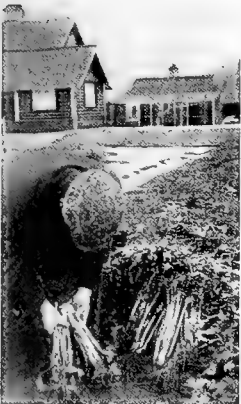
January

THE GARDENER'S CALENDAR

First Month



Continuous bearing greenhouse vegetables should be mulched with manure



Trench stored celery should be protected so that water cannot penetrate to it



Plenty of sod and straw covering for the root pit will keep out the frost



To retain the whiteness of the cauliflower heads, break the leaves over them

SUNDAY

This calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, or course, for an average season.

5. It is not a good practice to allow leaves to lie on the lawn all winter. They should be raked into piles and carted to some corner where they can be composted. They are far too valuable to be burned, as is only too often done.

6. House plants must have some attention at this time: the pores or breathing organs become clogged with dust. Sponge the foliage with a good soap solution in lukewarm water, with a little tobacco extract in it.

7. Why not make a small plan of your place to scale. You can then chart any changes intelligently, mark the location of water pipes, wastelands, and other information that it is often necessary to know quickly and accurately.

12. Bean poles and pea brush are necessary accessories of the productive garden. Why not gather some now while other outdoor work is slack. Do not put it off until spring, or in the rush of other preparation it may be omitted.

19. Before spring all the fruit trees must be looked over carefully and every mummified fruit removed. These diseased, shriveled fruits are the breeding places of many of our insect enemies, and they should be burned.

26. Have you ever given more than a passing thought to your garden soil? Your State agricultural college will make a soil test for you, perhaps free of charge, saving you many dollars in wasted fertilization. Write to them.

27. Have you ever figured the loss in your garden from summer droughts? Checkmate the dry weather with one of the good irrigating systems that are on the market. Order it now, before the rush; it can be installed later in the year.

28. Dahlia bulbs should be looked over at this time, as you can tell now how they are going to keep. If they are shriveled, cover them with sand; if they show signs of starting into growth they should be kept in a cooler place.

WEDNESDAY

1. Do not neglect to mulch thoroughly all the late plantings of bulbs, perennials and other soft plants. Coarse manure is the material preferred for this purpose. Leaves or any light stuff may be used, however, if manure cannot be had.

8. Crops that have been growing in the greenhouse for any considerable time should be mulched. Pure cow manure is the best material for this purpose; several inches of it should be applied to the benches where the plants are.

15. What about cold frames for your garden this coming spring? You can easily build the frames yourself, but the sash must be ordered now or you won't have them in time. Remember that the early cold-frame is the best.

22. A good grape arbor is both attractive and remunerative. Build the arbor substantially and buy only good varieties of grapes for it. Trench the ground beneath the arbor so that the plants will grow and produce abundantly.

29. All kinds of hardy plants that require it can be pruned at this time. Young fruit trees should be pruned severely, while trees that have attained fruiting size need only very moderate reducing. It is well to look them all over now.

THURSDAY

2. Spraying of dormant trees and shrubs may be practiced throughout the winter months. Any of the soluble oil sprays may be used for scale and other bark infections. Stronger solutions may be used now than later.

9. Chicory and rhubarb can be forced under the benches in the greenhouse. Use a drop curtain to exclude the light. The roots may also be grown in any warm cellar. Mushrooms, too, may be grown in similar situations.

16. Potatoes and other stored root crops should be picked over and any bad tubers removed. In very dry cellars where the tubers are likely to shrivel they can be covered with salt hay or straw to exclude the air.

23. Plants that are growing in the house should be top dressed occasionally with some sort of concentrated plant food. Prepared plant foods come for this purpose that are excellent and odorless. Your dealer will have them.

30. It will soon be time to start hotbeds for the early vegetables and flowers. Fresh manure must be used for this purpose; it would be a good policy to start gathering it now, so as to have plenty when the time comes for using it.

FRIDAY

3. Newland that is intended for growing purposes can be made ready for growing by burning the long grass while it is dry. This is also excellent treatment for the grass growing in orchards and bordering cultivated fields, etc.

10. It is a bad practice to scrape the bark from trees, as a considerable amount of the live bark will be injured. When the bark is moss grown it can be cleaned by scrubbing it well with a stiff, hard bristled brush.

17. During severe freezing weather, large trees can be transplanted with absolute safety. Dig them with good sized balls of earth around their roots and let them freeze hard before moving. A stone-boat can be used for transportation.

24. While the vines are dormant is an excellent time to take them down for any painting that may be necessary on buildings or fences where they are growing. Necessary repairs should be made before replacing the vines.

31. Many evergreens are damaged every winter by allowing wet, heavy snows to accumulate on their branches, breaking them down. Take a wooden rake and shake the trees gently to remove the snow after every heavy storm.

SATURDAY

4. Don't neglect to keep up regular sowings in the greenhouse of those crops which require frequent plantings to assure a supply. Beans, cauliflower, lettuce, radishes, spinach, etc., are all true croppers and may be planted in this way.

11. Plants that are being wintered in frames require air and light occasionally or they will become soft and yellow. Open up the frames on every bright day, and always water them in the morning so the plants will be dry at night.

18. While the trees and shrubs are dormant caterpillar nests and egg masses of various insects are readily discernible. Burn the nests with a torch of kerosene-soaked rags, and paint the egg masses with a solution of creosote.

25. All edged tools should be looked over now and those that need it must be sharpened. Lawn mowers that are in need of repairs ought to be attended to at this time, and if the wheel-hoe needs tinkering it should be fixed.

What are these maples and beeches and birches but oaks and oaks and madrigals? What are these pines and firs and spruces but holy hymns?
—Oliver Wendell Holmes



Hyacinths, narcissus and other bulbs may be lifted and brought indoors



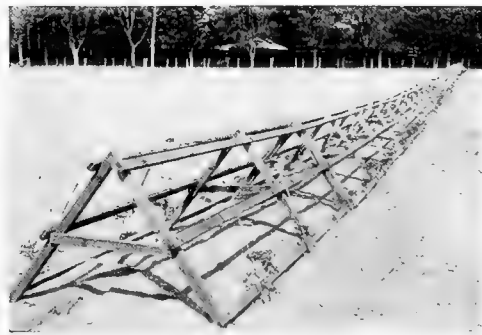
Old croquet wickets can be utilized to hold the leaf mulch over small plantings



Liquid fertilizer is simply prepared by placing a sack of manure in water



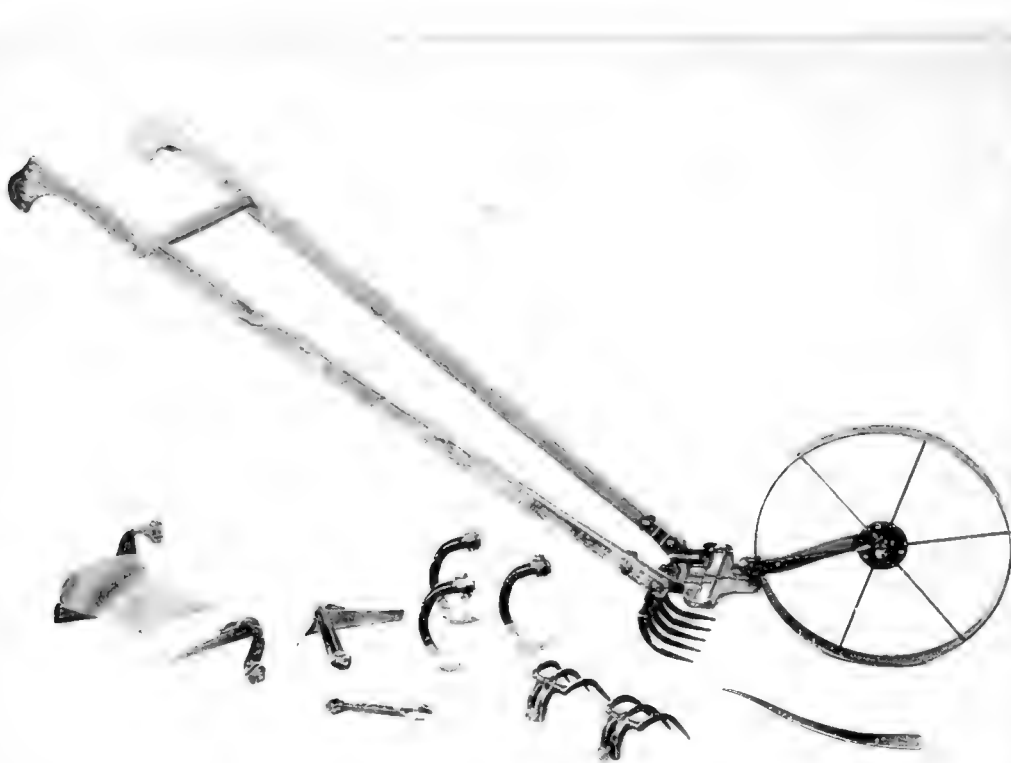
Cuttings from grapes and greenhouse fruit trees should be taken now



A good tomato trellis pays for itself in improved yield. It is a good plan to make one this winter, building it in sections to facilitate handling



Straw mats are excellent covers for cold frames. They can be bought from supply men; or if you have enough long-fibered straw you can make them yourself



The most useful of the vegetable gardener's implements is the wheel hoe. The single-wheel type comes with attachments for covering, hilling, cultivating and making drills

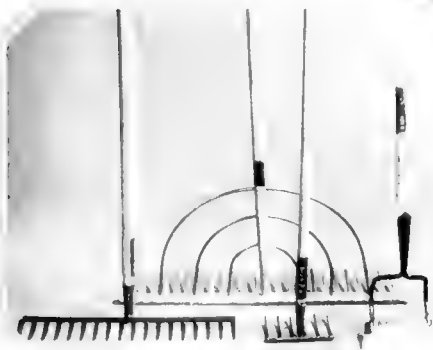


Spade, hoe and spading fork—the three musketeers of the garden. In buying implements of this kind, buy the best and see that they are always kept clean and ready for work

A sprayer is essential to insect and disease control. This one operates by compressed air and comes with a brass tank. Reel and line and pruning shears are also garden requisites



The advantage of a double wheel hoe is that it can work on both sides of a row simultaneously. This type comes with all the necessary attachments



Rakes there must be, of course. The large one with wooden teeth and steel bow is for lawn work. The regular steel type is for pulverizing soil and the narrow style for narrow work. The tuffe hoe is an excellent weeding tool



THE BIG TWELVE IN GARDEN TOOLS

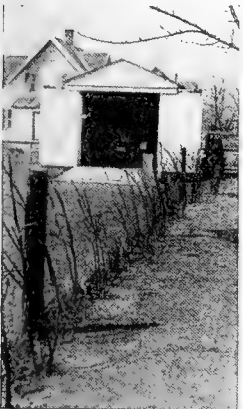
February

THE GARDENER'S CALENDAR

Second Month



Foliage trees may be trimmed this month, before the sap rises



Why not some raspberries or other cane fruits around the garden?



Late this month sow sweet peas under glass for later garden effects



When preparing the seed box or flat, use plenty of drainage material such as oyster shells or broken crocks



When they have made their first true leaf the young plants should be transplanted, setting them about 2" apart



When the forcing bulbs have fully developed in the greenhouse they should be moved to a cool, dark place

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>As sunbeams stream through liberal space And nothing jostle or displace, So waned the pine-tree through my thought And fanned the dreams it never brought.</p> <p>—Emerson.</p> <p>2. No one can garden well with dull or poor quality tools. This is the time to do any repainting that may be necessary. All edged tools must be sharpened before their active growing season starts. Pop dressing is the alternative.</p> <p>9. Deciduous trees and shrubs also require pruning to keep them in good health. Early flowering subjects such as the lilac or spiraea are best pruned after they have finished flowering along in the spring.</p> <p>16. Start sowings now in the greenhouse of the hardy vegetables such as cabbage, cauliflower, lettuce, celery, tomatoes, etc. Use flats or seed pans for greater convenience, and provide plenty of drainage.</p> <p>23. Before work is started outside you should make an inventory of your tools. Any new ones necessary must be ordered now. Tool designs keep on being improved as well as other things, so look them over.</p>	<p>3. All plants that have been in the same pots for any considerable time, such as palms and other decorative things, should be repotted before their active growing season starts. Pop dressing is the alternative.</p> <p>10. Pea brush, bean poles and tomato stakes are necessities of a productive garden. A few hours spent with an axe in the woods will furnish you with these needed accessories. Gather them before they leaf out.</p> <p>17. Have you studied the merits of a fruit border? No place is complete without one. Raspberries, currants, gooseberries, blackberries, grapes—all these make excellent border plants for the garden.</p> <p>24. Sweet peas may be started now in the hotbed or greenhouse. Paper pots are excellent for them. After the seeds have germinated the plants must be kept rather cool to prevent their getting soft and weak stemmed.</p>	<p>4. Plant stakes are necessary evils; we all wish that the plants would not require supporting, but they do, and we must accommodate them. Order stakes now. If you can't do this, cut some in the woods.</p> <p>11. Bay trees, hydrangeas, oranges and other plants of this type that are used for decoration outside in the summer should be looked over to see if the tubs will stand up through another season's use.</p> <p>18. Now that spring is so near let us think again of greenhouse construction. Greenhouses certainly raise the standard of any grounds, whether they be for fruit or flowers. Early planning means fewer errors.</p> <p>25. Flowering plants of all kinds that are wanted for Easter must be started into active growth. By postponing this and then trying to rush them along the plants are invariably grown too warm and in many cases ruined.</p>	<p>5. Have you ordered your supply of seeds? They should be on hand now. An old bread tin makes a good mouse-proof storage for them. Don't let the seeds get damp—a cool, dry place is the ideal storage.</p> <p>12. Have your trees looked over carefully to determine their true condition. It takes a lifetime to grow good trees but they are subject to injuries of many kinds. A little tree surgery at the right time will save them.</p> <p>19. If you cannot afford a greenhouse there are numerous styles of plant protectors that are helpful to gardening. They should be ordered now, as their greatest value is in the early season. Glass ones are excellent.</p> <p>26. Garden arbors as they are now made are very attractive and necessary accessories of the garden. If you wish to enjoy them this summer they should be ordered now, as well as the roses or other vines for them.</p>	<p>6. Summer flowering bulbs such as canna, gladioli, dahlias, caladium, etc., should be looked over carefully. Excessive heat or moisture will start them into growth; dampness with a low temperature is apt to cause decay.</p> <p>13. If you like golf you should have a practice green constructed on your grounds in some screened corner where you can practice when you want to. Sow it with fescue and creeping bent grass in equal quantities.</p> <p>20. No garden is complete without some well selected and properly arranged garden furniture. In formal gardening pottery is very necessary to the completeness of the scheme. Make your selection and order now.</p> <p>27. All dormant trees and shrubs that are subject to the attacks of San Jose scale should be sprayed with one of the soluble oils. Trees that are already infested must have at least two thorough sprayings.</p>	<p>7. Have you progressed any further than your mind with that rose garden you have been considering all these years? Each year that you postpone establishing it means that you are losing just that much pleasure.</p> <p>14. It is much easier to overhaul your lawn mower now in the garage than it will be next summer on the lawn. At least the gear boxes must be cleaned out and repacked with vaseline, and the other bearings oiled.</p> <p>21. Stock plants of all kinds of bedding subjects should now be started into active growth so that the necessary quantity of cuttings will be ready for taking when the proper time for them comes in the spring.</p> <p>28. Sprays of all the early flowering spring shrubs can be cut and placed in water in the house where the flowers will quickly develop. Pussy willow, golden bell, Japan quince, etc., can be forced in this way.</p>	<p>8. Have you pruned your fruit trees? They will produce if left in a natural state, but not nearly so well. Good fruit is produced only where intelligent pruning is practiced, so your labor will be well repaid.</p> <p>15. Start to prepare your hotbed now. At least 12 inches of good hot manure will be necessary for making it. Tramp this manure and cover it with about 4 inches of good garden soil that has been well screened.</p> <p>22. Have you ever given thought to the comforts of our greatest garden friends the birds? Why not get a few houses where the birds can nest? A bath for the birds will give even more pleasure to you than to them.</p> <p>There is no peace for the blowing leaf, The end of his journey he never knows; He lifts from the ground with an upward wave; Or settles, as talls the wind or blows.</p> <p>—Harry Kemp.</p>



The stakes and poles for tomatoes and beans may be cut now



Currants and gooseberries may be sprayed now for scale, etc.



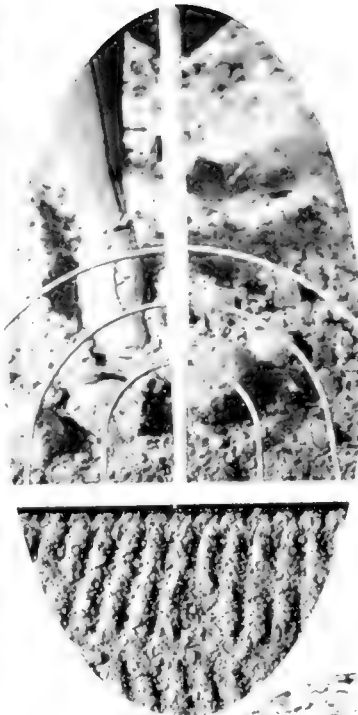
Proper attention to wounds, etc., is essential to the health of trees

THE first clear day we've had in a week—it's snowed pretty near all the time since last Wednesday—an' this mornin' I druv the wood sled up on the mounting for a load o' logs. By jing, it was great—all blue an' white an' sparkly, same as a Christmas card. There warn't a breath of air stirrin', an' the clouds—wa'l, sir, it fair hurt yer eyes to look at 'em, they was so darn white an' still an' kinder overpowerin', pili' up up into the sky, ye know, from behind the hills like in a picture. Clouds are blame human sorter things, any-how. Some's skinny an' gray an' old lookin', an' they gener'ly makes ye mighty low-spirited. Others're reg'lar high fliers, feather-headed little critters that make ye feel like whistlin'; they're fair weather clouds, an' they ain't got a care in the world. They ther's the dull, weepy kind, no character at all; an' them that's always in hurry; an' the blusterin', thundery ones that growl like they was goin' to kill ev'rybody in sight an' then edge past without really doin' nothin' to speak of. An' they all come an' change an' grow fat er thin an' finally disappear, an' we never see 'em again.

—Old Doc Lemmon.



1. Dig the soil deeper each year. A fork may be used in well-worked gardens



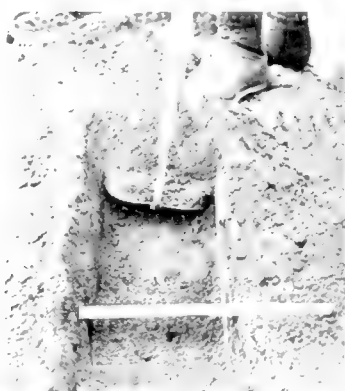
2. Walk backward and smooth the ground with a wooden rake



3. A sharpened stick or plant label makes the small drill



4. For the medium sized drill, hold the draw hoe on edge so as to use its end



5. In making the wide drill for peas the whole width of the hoe is utilized



6. Lettuce and similar seeds are sown in narrow drills direct from the envelope



7. The medium sized drill is the one to make for planting bush beans

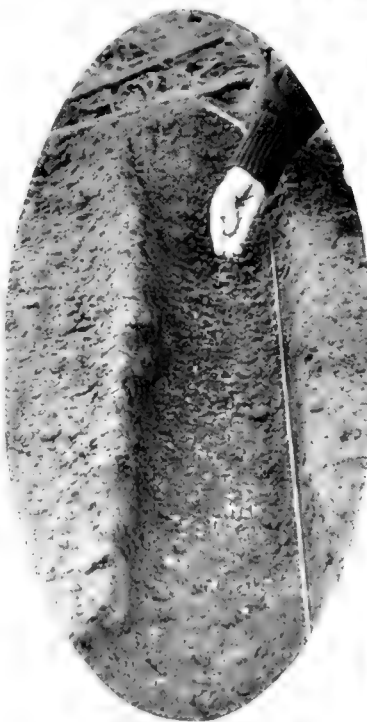
220254



8. Onion sets, too, can be planted in the drill of medium size. This entails considerably less labor than making individual holes for them, and the results are good



9. Bush limas should go in double rows in the wide drill. Planted thus, they will make a well filled line. Artificial supports are unnecessary for bush varieties



10. In the wide drill peas are sown broadcast to assure a good row. After the plants are well above ground they may be thinned out if the row is crowded



11. Corn, pumpkins, cucumbers, melons, etc., are sown in hills. The soil in the hills should be thoroughly cultivated several inches deep and well enriched

HOW TO PLANT SEEDS

March

THE GARDENER'S CALENDAR

Third Month



Now is the time to start putting in cuttings of the bedding plants



The manure mulch on the lawn should be raked up and carted away



Barrels or tall baskets placed over the rhubarb will make better stalks



Potato planting may begin just as soon as the ground can be worked. Cool, moist soil is the best



All the plowing should be finished as soon as possible. Use a subsoil plow and get down really deep



Keep the soil well stirred around the plants in the cold-frame. A small "claw" is the best tool to use

SUNDAY

30. Most of the diseases to which potatoes are heir are caused by dry, hot weather. Potatoes like cool, moist soil. Prepare a piece of ground and plant them now, or as soon as the soil can be worked. An early start makes success.

2. All the necessary pruning must be attended to now. Foliage trees and shrubs, all the flowering types that blossom on the terminals of the new growth, such as roses and fruits of all kinds require attention.

9. Where absolutely necessary, bay trees, hydrangeas and other ornamental plants should be re-tubbed. Others can be re-fertilized by digging out some of the old soil with a trowel and filling in with a rich mixture.

16. Specimen trees of all types that are not growing satisfactorily can be invigorated by cutting a trench entirely around the tree about four feet from the trunk and filling it in with good rich earth well tamped down.

23. All the various garden tools will soon be in use regularly. Are they in proper condition? Good work is impossible with poor or dull tools. Cover all the implements, removing any rust and sharpening the cutting edges.

MONDAY

31. Rhubarb should now be showing some growth. Barrels placed over the plants will give earlier and better stalks. Beds that were not mulched should have a good application of manure dug into them at about this time.

3. Chrysanthemums for next fall must be propagated now. If the space is available it is a good practice to put in a batch of cuttings every four weeks until June to assure a long period of bloom in the autumn.

10. Cannas, especially the newer or better types, should be divided by cutting the eyes separately. They can then be rooted by placing in sharp sand, or they may be potted up in a very light soil mixture if you prefer.

17. This is the time to think of flowers for next winter in the greenhouse. Primula of the Chinese or Obconica type, cyclamen and antirrhinum are three of the best sorts. They should be started from seed now under glass.

24. The top protection on the rose bushes can now be removed; dig the winter mulch of manure well under. A liberal application of bone meal to the soil will produce worth-while results during the flowering season.

TUESDAY

This calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.

4. Asparagus is one vegetable that starts growth very early, so dig the winter mulch under now, hill up the rows on the old plantings, and apply salt liberally to the bed. New plantings should be started now.

11. Sowing of all the more common types of annual flowers should be attended to now. Asters, zinnias, calendula, balsams, salvia, marigold, scabiosa, pansies, stocks, etc., are some of the many varieties that may be planted.

18. Before the buds burst on the deciduous trees and shrubs, the whole growth should be looked over carefully for any caterpillar nests, which can easily be destroyed by burning without injuring the plants.

25. Sweet peas may be sown out of doors now. Dig trenches about two feet deep and the width of a spade. Fill the trench with good top soil and manure well mixed and sow the seed about two inches below the surface.

WEDNESDAY

5. All new plantings of hardy stock must be set out. The earlier in the planting season this is done the less losses you will have. Just as soon as the frost leaves the ground is the proper time for work of this sort.

12. Have you everything in readiness for the opening of the big garden drive next month? Seeds, garden line, plant labels, measuring stick, pea brush, bean poles and tomato supports are a few essentials.

19. Small fruits of the different types can be planted now. Grapes, raspberries, blackberries, etc., can be trained on wire trellises, or stakes may be used. The latter are neater and more economical of space.

26. Boards, straw, burlap, cornstalks and other winter covering materials for box-wood and such tender plants must be removed now. If possible, select dull, cloudy weather for carrying on this operation important.

THURSDAY

6. Changes of all kinds where the moving of plants, soil, hedges, etc., is involved must be carried into execution at once. This also applies to earthen walks which, if altered in early spring will settle by summer.

13. Better make arrangements now to use your greenhouse for some useful purpose this summer. Potted fruits, chrysanthemums, melons, English forcing cucumbers, etc., are some of the many possible products.

20. All the best varieties of dahlia roots should be started into growth so that cuttings can be made of those desired. If the roots are laid upon a few inches of sand and watered freely they will soon start into growth.

27. Mulches of all kinds applied to shrubbery borders, perennial plantings, flower beds, etc., should be dug under. In doing this, get the manure as deep as possible and see that it is thoroughly incorporated with the soil.

FRIDAY

But now the moon's a ghost in silver mail, As, blowing through a storm of stars, the earth Dips downward into dawn, dugged with light. Sunlight which is the golden laugh of God.

—Harry Kemp

7. Cuttings of all the various types of bedding plants should be started in sand and potted at this time. Use pots about 1 inch larger than the plants now occupy. The soil must be light, containing plenty of leaf mold.

14. Any changes in old plantings or new plants contemplated for the perennial border should be finished up at the earliest moment. Those which are planted early in the season will flower late this summer.

21. If you are considering new lawns this spring get the ground ready for seeding just as soon as it can be worked. Early sowings will prove to be much freer of weeds than those which are made during the summer months.

28. Manure applied to lawns last fall must now be raked up. All lawns should be raked clean and rolled or tamped. A top dressing of wood ashes and bone meal will help to produce a good vigorous growth of grass.

SATURDAY

1. If you have not already planted them, seeds of cabbage, cauliflower, celery, parsley, lettuce, tomatoes, egg-plant, peppers, leek and onions should be sown. See page 41 for detailed information on this work.

8. All the exotic plants, such as kentias, dracaenas, coccas, arecas, etc., should be re-potted at this time. Use pots about 1 inch larger than the plants now occupy. The soil must be light, containing plenty of leaf mold.

15. Make a habit of heading in your nursery stock the instant it arrives. Stock that is allowed to lie around in the wind and sun is certain to show heavy losses, because its roots will be dried out and the smaller ones will die.

22. The covering on the strawberries should be removed and burned and the manure mulch can be dug under. In cases where for some reason no fall mulch was applied the bed should be well manured and dug in.

29. All trees and shrubs that are subject to attacks of San Jose scale should be sprayed with one of the soluble oil mixtures before the buds swell. At least forty-eight hours are needed to smother these pests.



The mulch under shrubbery, roses, etc., should be dug under this month



Clean, fine sand applied to the lawn will kill off many weeds



Most roses need severe pruning now. Leave two or three buds on new wood

I RECKON ye'll think I'm a crazy old fool when I tell ye what I done this mornin', but I couldn't help it no more'n a song-sparrow settin' in the sun down along the brook can help whisperin' away to himself about how spring's comin' in a couple o' days. Wa'l, here it is, anyway—I went out in the pasture lot an' flew a kite till 'Lisa hollered fer me ter come in ter dinner! Dunno jes' why I done it, 'cause ye know I'm shadin' seventy year an' the rheumatiz's been pesterin' me all winter. Somethin' in the feel o' the wind, though, an' the way the cloud shadders raced, kinder reached 'way down inside me an' took a-holt, an' I jes' had ter go. Fun? Why, say, stranger, I ain't had such a good time in I dunno when! Reg'lar kid I was, a-settin' ag'in the sunny side o' the barn, feelin' that queer springy pull on the string an' watchin' the kite swingin' lazy-like away up thar between the clouds. Sent some paper messages up the string, too; funny how dark they looks when they gits up a ways, an' then all silvery as the wind flips 'em around so they catches the sun. Made me feel twenty year younger, an'—wa'l, I don't care if the rheumatiz is extry bad tonight!

—Old Doc Lemmon



Poles are the usual supports for the climbing kinds of limas. Cedar is the best and most durable wood. Set the poles firmly and let them stand about 6' high



The beans should be planted directly about them to ensure good drainage and minimize the danger of rotting through excessive moisture during germination

TELLING *the* TALE
o f T H E L I M A

IN any well regulated garden calendar for the latitude of New York City, May 1st is planting day for lima beans. On or about that date everything should be ready, for where is the vegetable garden worthy of the name which has not its limas?

These beans are among the most desirable vegetable crops. The vines seldom fail to produce abundantly if conditions are reasonably favorable and standard sorts have been planted. There need be no waste of the crop, however, for if the yield is greater than can be used on the table while fresh, the surplus can be successfully and without great trouble preserved for use next fall and winter.

The photographs and captions on this page tell the tale of the principal steps in pole lima culture. Choose a good variety like Early Leviathan, and plant in hills 3' to 4' apart each way. One-quarter of a pint of seed will be enough to plant a row 50' long. This quantity will cost you about twenty-five cents at any good seed store. Succession plantings may be made until the middle of June, to insure a longer cropping season.



Lima beans should be planted with the "eyes" of the seeds down, five or six to a hill, in a circle around the pole. Cover them with about 1" of soil



When the vines begin to show a tendency to climb they will need some assistance to start them properly



As soon as the young plants are large enough to show their relative sturdiness, thin them out until only the three strongest remain in each hill



Lima beans may be planted in among the corn, whose stalks will furnish them with support as well as shade

April

THE GARDENER'S CALENDAR

Fourth Month



The ground between rows should be kept well stirred with a wheel-hoe



The dead leaves may be swept from the ivy with a long handled broom



The garden rows should be laid out before sowing is actually begun



Cultivate the soil close up to the plants, especially when they are small

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>1. Wonder if they like it—being trees? I suppose they do. . . . It must feel good to have the ground so flat. And feel yourself stand right straight up like that— So stiff in the middle—and then branch at ease. Big boughs that arch, small ones that bend and droop, And all those fringing leaves that flutter so. —Charlotte Perkins Stetson.</p>		<p>1. Strawberries should now be uncovered for the season. The winter mulch of manure can be forked under. If no mulch was applied, however, give the bed a good top dressing with bone meal before digging.</p>	<p>2. Raspberries, blackberries, currants and gooseberries that were buried last fall can now be unearthed. An application of good manure worked into the border now will materially improve the fruit.</p>	<p>3. Weather conditions vary, but usually it is safe to start sowing seeds of the more hardy types of vegetables now. Peas, spinach, radishes, onions, parsnips, beets, carrots, Swiss chard, etc., are all seasonable.</p>	<p>4. Early planting is the first essential to success. Finish all plantings of deciduous trees and shrubs at the first opportunity. Firm the plants well in the soil and don't allow them to suffer from lack of water.</p>	<p>5. The lawn should be looked over carefully to assure a velvety green sward this summer. Sod any small bald spots, and spade and seed down large spaces. An application of bone meal or wood ashes is advisable.</p>
<p>6. If the asparagus bed was mulched last fall it can be turned under now. Hill the soil up to the rows if you like your asparagus white. Salt in liberal quantities should be applied to keep down the weeds.</p>	<p>7. That unproductive orchard can be made to yield abundantly if you resort to the proper use of cover crops. To prove this, sow now a mixture of Canada field peas and oats, and plow them under when they are about 2' high.</p>	<p>8. If you have not pruned the hardy roses it must be attended to at once, because roses start into active growth very early. Prune the hybrid types to three eyes, but leave about 4" of new wood on the teas.</p>	<p>9. The secret of success with potatoes is early planting; these plants are quickly destroyed by hot, dry weather. To avoid this danger plant now, so that the crop will come to maturity before the trying weather strikes it.</p>	<p>10. If properly hardened, plants of the more hardy types of garden vegetables can be set out now, such as cabbage, cauliflower, lettuce, onions, etc. Cover them with plant protectors or paper on dangerously cool nights.</p>	<p>11. Have you stakes on hand for dahlias and other tall flowers, raffia or jute cord for tying, an arbor for the garden roses, a sundial for the flower garden. You are sure no essential has been forgotten? This is the time to check them up.</p>	<p>12. Before the trees and shrubs leaf out it is advisable to go over them carefully, destroying any caterpillar nests before they hatch. An asbestos torch is the best weapon to use; slight scorching will not injure the plants.</p>
<p>13. Seeds of the more hardy flowers such as snapdragon, asters, alyssum, calendula, centaurea, pansies, violas, scabiosa, etc., may be sown outside at this time. Have the soil well pulverized, as flower seeds are very fine.</p>	<p>14. Plants in tubs intended as specimens for the grounds should be watered freely with liquid manure. Where it is not convenient to make or use this, a top-dressing of pure cow manure can be applied to them.</p>	<p>15. All borders or open spaces around plants should be kept loosened up with a digging fork. This admits the necessary air to the soil and also prevents the rapid evaporation of the moisture if the weather is dry and sunny.</p>	<p>16. The perennial border should be overhauled. Any existing voids must be filled in either by new plants or by dividing those which are left. Dig under some good manure or give the beds a top-dressing of raw crushed bone.</p>	<p>17. Frames for the melons must be set in place now. See that the hills are well prepared inside of them, using plenty of good manure and chopped sod. The seed may be sown just as soon as the soil is thoroughly warmed up.</p>	<p>18. This is the proper time to start some plants from seed for flowering next winter in the greenhouse. Primula, cyclamen, snapdragon and many others should be started now and grown during summer in frames.</p>	<p>19. Do not let your greenhouse be idle all summer. There are many worthy crops which can be started now, such as potted fruits, melons, tomatoes, cauliflower and chrysanthemums. Do not let the house be empty.</p>
<p>20. Keep the soil constantly stirred between the garden rows. Seeds that are slow in germinating can be protected by placing the line between the labels. Soil cultivation is more necessary with young plants than old.</p>	<p>21. Start hardening off the bedding plants in the greenhouse or frame now. It is certain death to set out coleus, geraniums, etc., unless they have been properly hardened, which ordinarily takes about two weeks.</p>	<p>22. Do not neglect the sweet peas when they are small—see that they are properly hilled when about 4" high. Supporting them should not be postponed until they have been flattened by wind or rain and damaged.</p>	<p>23. Any large trees that have been recently transplanted must not be neglected. Liberal watering is essential, and heavy mulching is also a good practice. Make soil tests to see that the soil below the roots is sufficiently moist.</p>	<p>24. It is a mistake to make what sowings are necessary to give a continuous supply of quick maturing crops such as peas, beets, carrots, spinach, etc. The common rule is to sow when the preceding sowing is above ground.</p>	<p>25. Summer flowering bulbous plants as gladioli, montbretias, begonias, etc., are very little effort and are worthy a place in any garden. They may be planted any time now, the gladioli at bi-weekly intervals.</p>	<p>26. Thinning out crops is more important than many suppose. Plants that are allowed to crowd become soft and spindly and can never develop healthily. Crops that require thinning must be tended to when very small.</p>
<p>27. Bean poles can now be put in place for the limas. Dig liberal sized holes for them, working plenty of manure into the soil when refilling. The mound or hill should be about 4" above the adjoining grade.</p>	<p>28. This is the proper time to have the greenhouses overhauled. Broken glass should be replaced, loose glass can be reset, and the woodwork should be protected by at least one coat of good exterior paint.</p>	<p>29. Have you spraying materials on hand for the host of bugs and diseases that are certain to visit you this summer? Spray the currant bushes now with arsenate of lead to destroy the green currant worms while small.</p>	<p>30. If you grow any crops for the livestock the ground for them should be made ready. Mangels, carrots and sugar beets are staples and can be sown now, although corn must wait for warmer weather.</p>	<p>This calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.</p>		

WE'VE been fixin' up to-day, spring-cleanin' the grounds, ye might say. They was a lot o' stuff—twigs from the winter prunin', straw covers from the strawberry beds, branches busted off'n the trees by the wind, dead grass an' things we overlooked las' Fall—which had to be got out o' the way. Me an' Sam lit into 'em right after breakfast, rakin' an' haulin' an' pilin'. By supper-time we was through, so we fired the piles. Most o' the stuff was pretty dry, an' jiminy, how she did burn! The big pile at the edge o' the orchard blazed so hot we couldn't hardly git close enough to throw on anythin' more, an' ye could hear it cracklin' clear up to the house. I took a look at it 'long about dusk, to make sart'n it couldn't do no damage durin' the night. It had all burned down to gray ashes with a little pile o' red coals in the middle, an' the sky in the west was gray and red, too—kind o' background, like, for a picture. A still evenin' it was, with millions o' peeper frogs jes' bustin' their throats down in the lower medder an' the smoke from the fires layin' in streaks close to the ground. It smelled different, that smoke, from what it did in the Fall. Then it made ye sad, 'cause it meant that the year was dead; but last evenin' it was full o' ideas 'bout flowers an' green leaves an' new crops gittin' away to a fresh start.

—Old Doc Lemmon.



Maples are pruned just as the foliage expands. Paint the wounds



Peas should be hilled when 4" or 5" high, to protect them from breakage



Indoor started sweet peas and other hardy things may now be planted out



Melon frames should be put in place several days before the seeds are sown, so as to warm up the soil and promote quicker germination



During this month many of the flower seeds may be planted out where they are to grow. Often annuals are good to supplement perennial plantings



Contemplated changes in the perennial garden should not be forgotten

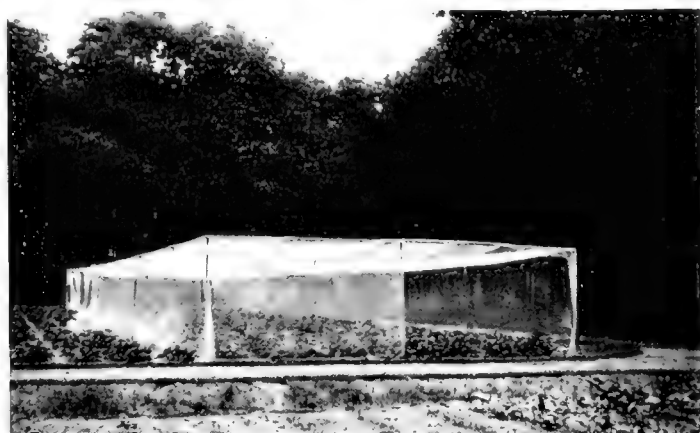
IN YOUR OWN BERRY BED

Hand cultivation and weeding are as important in strawberry culture as with other garden crops

The straw mulch placed under the ripening berries keeps them clean and free from earth

Hanging rags and other "scarecrows" tend to keep marauding birds away from the fruit,

but the only sure protection is a net properly erected on a regular solid framework



When a wise selection of varieties is made, the crop will last several weeks at least



Strawberries are propagated by runners. Pot some each year for the following season



Runners which are not to be potted should be removed, to centralize the plants' energy

May

THE GARDENER'S CALENDAR

Fifth Month



Work the fertilizer into the ground around the roses with a steel rake



Immediately after transplanting, water copiously to settle the soil



The burned tips of the ornamental evergreens can be cut out with shears



The tall flowers like dahlias and hollyhocks need individual stake supports



If you have space without sacrificing other vegetables, you can now plant potatoes



Annual flower seed should be sown in the open without delay if you want best results

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>What a garden of surprise Out beyond my window lies! Fancy, when the night is there, Gentle trees with drooping hair Rocking, rocking cradle-wise, Little stars with yellow eyes! —George Cronyn</p>	<p>This calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.</p>					
<p>4. It is unwise to postpone potato planting any longer if you want good results. Potatoes are a cool crop and late plantings of them, however well cared for, are rarely successful. Use a fertilizer with 1% potash.</p>	<p>5. Most of the more common annual flowers may be started out of doors now. Have the soil in which they are to go well prepared far enough ahead so that it will pulverize when being worked. Sow the seed thinly in drills.</p>	<p>6. Tubbed plants of all kinds used around the grounds for decoration may be taken from their winter quarters and moved into place now. To maintain growth, these plants should be given liquid manure.</p>	<p>7. All the summer-flowering bulbous plants may be set out now. To assure a continuous supply of gladioli, they can be planted at bi-weekly intervals. The rule is to plant all bulbs twice as deep as their diameter.</p>	<p>8. Crops that are more or less inactive and are not growing well should be stimulated with an application of nitrate of soda or some other strong fertilizing element used in liquid form to bring about quick results.</p>	<p>9. Carnations intended for forcing in the greenhouse next winter can now be planted out in the garden. Have the ground well fertilized, keep them pinched back, and see that the soil between them is cultivated.</p>	<p>10. Maple trees should be pruned just as the buds are bursting; there is no danger of their bleeding. Any large scars which may result should be painted with proper tree paint to preserve the wood until the cuts heal.</p>
<p>11. Do not delay cutting the lawn until the grass is so long as to necessitate raking. Good lawns are the result of liberal fertilization and frequent mowing; the latter in some cases twice a week in growing weather.</p>	<p>12. The edges of walks, flower beds, shrubbery borders, etc., should be trimmed cleanly and neatly with a turfing iron every few weeks through the season. This finishing touch is necessary to complete your grounds.</p>	<p>13. Now that the garden work is in full swing, invite yourself to get acquainted with the use of a wheel-hoe. These implements do the necessary work of cultivation more efficiently and with less effort than any other.</p>	<p>14. Weed killers are very necessary in stone gutters, blue stone walks and other places where it is unwise to use a hoe. One application now will destroy all undesirable growth for the season.</p>	<p>15. Make a small seed bed for the accommodation of late cabbage, cauliflower, kale, Brussels sprouts, etc. These should be sown now. Keep the young plants in separate beds until it is time to plant them out.</p>	<p>16. Roses for flowering in the greenhouse next winter should be planted in the benches now. Use a rich, heavy soil for them, firm the beds thoroughly after planting, and top-dress occasionally with raw bone meal.</p>	<p>17. A barrel of liquid manure in some convenient corner of the garden will be a valuable accessory for treating plants that are not doing well. Alternate applications of this with solutions of nitrate of soda.</p>
<p>18. Just before the general flowering season begins in the perennial garden it is a good practice to top-dress the beds with bone meal or other concentrated fertilizer. Scatter it on the surface and rake it into the soil.</p>	<p>19. Leaf beetles of various types will soon be at their destructive work. Spray the currant bushes, gooseberries, elms, cherries, etc., using arsenate of lead as the most adhesive of any of the regular poison sprays.</p>	<p>20. Leaf-eating insects will also soon be working in the garden. For them a poison spray on the foliage is the thing to use. Cover the squash vines with nets, as illustrated on this page, to protect from squash bugs.</p>	<p>21. It is unwise to postpone the sowing of farm crops any longer. Mangels, sugar beets, carrots, turnips, etc., should be sown. As size is the important factor with these crops, early sowing is needed.</p>	<p>22. Do not neglect to keep up succession sowings in the garden, as advised elsewhere in this issue. Corn, beans, spinach, peas, radishes, lettuce, beets, carrots, chervil, cucumber, cress, kohlrabi and turnip are all timely.</p>	<p>23. A few dead flower stalks will make an otherwise good garden appear very ordinary. Keep the tall flowers supported with individual stakes, the grass edges clipped, and remove old stalks.</p>	<p>24. If the weather is dry you will be troubled with the attacks of green fly and other plant lice. Peas, lettuce, egg-plant and other soft foliage plants are especially susceptible. Spray with strong tobacco solution.</p>
<p>25. Dahlias may be planted out now. Make deep holes for them, setting the plants several inches below the grade to allow for filling in the soil as they grow. Use a little sheep manure or bone meal in the bottom.</p>	<p>26. When the various fruit trees are in bloom they should be sprayed with a combination of Bordeaux mixture and arsenate of lead. This will destroy the various insects that ruin the fruit, catching them as they hatch.</p>	<p>27. Winter celery may be sown now. Make a seed bed for it and sow broadcast. When large enough to handle, dibble the little plants off into well prepared soil. When they are 4 inches tall you can plant them out.</p>	<p>28. If the weather appears settled, the bedding out of geraniums, cannas, salvia, coleus and other bed-plants may be started. If a delayed cold spell should come along, cover the plantings with old sheets.</p>	<p>29. After they have finished flowering, but not before, the lilacs, syringas, deutzia, forsythia, spirea, snowball, pearl bush and other early flowering shrubs should be pruned. Cut out the old, unproductive wood.</p>	<p>30. Keep the ground between the potatoes constantly stirred, and look out for the potato beetles. If any are in evidence, spray with arsenate of lead. Bordeaux mixture along with the lead will prevent attacks of blight.</p>	<p>31. Formal evergreens and hedges should now be clipped. Hedge shears are the best tool to prevent any voids in the trees. Branches and tips that have been burned by the sun can be removed with the pruning shears.</p>

DID ye ever stop ter think what a garden'd be like if they warn't no birds in it? Gosh a'mighty!—why, it wouldn't be no garden at all, hardly. I'd hate like thunder ter lose the robins a-huntin' worms along my paths at sun-up, an' the thrushes in the afternoon. 'Course, they's others—song sparrows that ye hardly notice 'cept when they's perched like sentinels on top o' the tomato trellis, er mebbe runnin' ahead of ye between the onion rows when ye're cultivatin'; an' wrens that flies over from their nest in the ol' box under the piazza roof ter catch currant worms; bluebirds in the spring, an' now an' then a catbird er brown thrasher, 'specially 'long in the summer. But the thrushes an' robins is my favorites; they're the real garden birds—never fergit ter sing a kind o' cheerful, full-hearted mornin' song from the trees, soon's they wake up an' fore they goes down ter breakfast. Pretty good way ter start the day, singin'.

—Old Doc Lemmon.



Good birch brush along both sides of the pea row is the best kind of support



Young hedges can be quickly trimmed with a sharp sickle instead of shears



Succession planting should be practiced so as to maintain the vegetable supply



Peas should be picked as soon as the pods are well filled out. Leaving them on the vines longer than that means that when they appear on the table they will be more or less mealy



Ripeness rather than maturity marks the time to gather vegetables. The former connotes high table quality, but the latter often spells toughness and loss of fine flavor

Gather the onions as soon as their tops die down. Pull them and lay them on their sides for a day or two to dry before removing the roots and tops



Okra is comparatively little known in the North, though well adapted to growing there. The fleshy, glutinous pods are the edible part of the plant

The keeping of notes, of records of the garden's growth, is at once a pleasant task and a valuable future guide. Planting and harvesting dates should be set down



The one positive test of the ripeness of corn is to strip the sheath leaves partly away from the ear. In the eyes of an expert the "feel" of the ear, the condition of the silk, etc., are significant



WHEN TO PICK VEGETABLES

THE greatest asset of the home vegetable garden is the opportunity it offers for supplying the table with the best of things in their most palatable stage of development. Unfortunately, many beginners do not realize that a delay of a few days in picking often means the difference between beans or peas or corn that are tender and juicy, and the same vegetables in a toughened and more or less passed condition. Distinction should always be made between ripeness and maturity. The former connotes high table quality; the latter often spells the opposite.

See to it, then, that your fresh vegetables do not grow too old before you gather them. Thus will you benefit your bill-of-fare, and be enabled sooner to prepare the ground for a new sowing.



June

THE GARDENER'S CALENDAR

Sixth Month



Sweet pea vines trained on fences should be tied up as they grow



Potato beetles should be met with poison sprays or powder



The unproductive suckers should be cut away from the corn



A little sheep manure scattered over the grass will improve its quality. This fertilizer should be spread as evenly as possible

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>1. Do not neglect to spray the fruit trees when they are in flower, using a combination of Bordeaux mixture and arsenate of lead. Spray thoroughly from different angles. This will destroy the many harmful insects.</p> <p>8. Look out for rose bugs. Go over the plants each day with a small can of kerosene, shaking the flowers over the can and causing the insects to fall into the kerosene. This will destroy them quickly and effectively.</p> <p>15. Onion maggots are very destructive at this season of the year. It is good practice to top dress the soil thoroughly with soot to keep them in check. Thorough attention in this matter will be well repaid by a better crop.</p> <p>22. It is good practice to go over the bedding plants, pinching the tips of their growth frequently. This will cause them to become more sturdy and to develop more quickly and in better form. Only the tips need removal.</p> <p>29. Lettuce will frequently run to seed at this season of the year. Boards or other covering material placed over the plants will tend to reduce the loss from this source. Remove all such covering during wet spells.</p>	<p>2. Sow now kale, Brussels sprouts, cabbage, celery and cauliflower. These when large enough to handle should be transplanted into other beds and set about 4" apart. From here they can be moved into the garden later.</p> <p>9. The climbing roses should be looked over carefully and any heavy, robust new growth should be tied into proper position. Pruning should be deferred until they have finished flowering, when the old wood is cut.</p> <p>16. One of the essentials in producing good fruit is the proper thinning of the crop. The trees should be gone over carefully now, reducing the quantity of the fruit by about one-half. Larger and better fruit will be the result.</p> <p>23. Don't neglect to soak the soil thoroughly when it is necessary to resort to artificial watering. Evenings or early mornings are the best time for this work. Cultivation should follow so as to re-establish the dust mulch.</p> <p>30. Crops such as potatoes, celery, tomatoes, etc., will be improved by mild applications of fertilizer. Scatter the fertilizer on the ground around the stems of the plants, working it well into the soil with a hoe.</p>	<p>3. Before applying a mulch to the strawberries to protect the fruit from dirt it is a good practice to give the plants an application of strong liquid food. This will greatly increase the size of the maturing berries.</p> <p>10. Fruit trees that have reached the producing stage should be sprayed regularly with Bordeaux mixture. This protects the fruit from the parasites and fungi. Successive generations must be destroyed as they hatch.</p> <p>17. Do not neglect to work the garden soil deeply and often. This not only keeps the weeds in check, but preserves the soil moisture for the use of the plants. If this is not done the moisture from the soil will quickly evaporate.</p> <p>24. Thinning out all the crops in the garden is advisable. This should be done when the plants are small and before the roots are interlocked, or numerous desirable plants will be removed. Water well before lifting.</p>	<p>4. Do not omit spraying the potatoes with arsenate of lead at the first appearance of the potato beetle. Filling the potatoes when they are in flower is advisable, as the stage the young tubers are forming.</p> <p>11. Tomatoes, cucumbers and melons, as well as other garden products that are subject to blight, should be sprayed at bi-weekly periods with Bordeaux mixture. Leaves that are affected should be removed at once.</p> <p>18. Now is the time to stop using the asparagus, as there are other vegetables available now to take its place. Keep the asparagus dusted during the summer with a poison to destroy the asparagus beetle.</p> <p>25. Carnations in the field which are intended for planting out in greenhouses for bloom next winter should be sprayed occasionally with Bordeaux mixture if there is any indication of rust. This will make much difference later.</p>	<p>5. A top dressing applied to the lawn now will encourage root action that will help the grass resist the dry weather sure to come later in the season. Sheep manure, bone meal or wood ashes are excellent materials to use.</p> <p>12. Care should be taken with all newly planted hardy stock that it be not allowed to suffer for lack of water. Thorough soaking of the ground—not a mere sprinkling—followed by a heavy mulch is needed.</p> <p>19. The flower garden should be looked over and any dry stalks should be removed. Plants that bloom throughout the entire season should be top-dressed occasionally with some good fertilizer to maintain vigor.</p> <p>26. Azaleas, genestas, acacias, etc., should be plunged in beds out of doors, where they can be well provided with water and sprayed. These plants will be making growth at this time and forming next year's buds.</p>	<p>6. If they have finished flowering, the early spring shrubs such as forsythia, deutzia, etc., should be pruned. The best method is to cut out entirely several of the very old branches. By pruning now no flowers will be sacrificed.</p> <p>13. All the hedge cutting should be done now. Frequent trimming is required in order to avoid making a number of unsightly voids. Hedges that have been neglected for some time may be improved by tying in shape before cutting.</p> <p>20. Fall flowers such as hollyhocks, delphiniums, helianthus, etc., should be supported before any damage is done by storms and heavy winds. Proper stakes should be put in and the plants can be tied in to them.</p> <p>27. It is advisable at this time to take large quantities of chrysanthemum cuttings. These if rooted now will make fine plants for 6" or 7" pots, or when bedded out will make stems about 3' long with good sized flowers.</p>	<p>7. Don't neglect to keep up the sowings in the vegetable garden. Corn, beans and cucumbers should be sown twice this month. Inter-cropping may be resorted to in many cases with the purpose of increasing the yield.</p> <p>14. It is a good plan to go over the tomato plants, reducing the quantity of unproductive vines and supporting those left to carry the crop. It matters little what system is employed to keep the fruit supported.</p> <p>21. Be sure you keep the lima beans and peas properly supported; the peas by staking and the limas by tying in to their poles. Bush limas should be supported by small pea brush placed in the row. Such attention repays.</p> <p>28. Keep a sharp lookout for aphids of all kinds if the weather is at all dry. If the plants are infested spray them for three successive evenings with a reliable tobacco solution. Be sure the spray reaches the undersides.</p>



A little fertilizer scattered on the soil will improve the crop



Some sort of trellis should be made ready for the tomato plants



A can partly filled with kerosene is an excellent receptacle for rose bugs

Into the stilly woods I go,
Where the shadows are deep
and the wind-flowers blow,
And the hours are dreamy
and lone and long,
And the power of silence
is greater than song.
—WILFRED CAMPBELL

This Calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.

—Old Doc Lemmon.



The root stock growth of grafted roses should be kept reduced



Old barrel hoops surrounding the plants and raised on stakes 1' or so make excellent supports for the tomatoes

SIMPLE SURGERY for FRUIT TREES

The properly pruned apple tree has a low head, an open center, and is not cluttered up with a lot of unproductive but strength-consuming shoots



(Lower left) A view of the same tree before pruning shows a typical example of the sort of neglect which cuts down the quality and size of the crop



When branches are removed they should be sawed off cleanly close to the trunk, leaving no stubs

Allowing several branches to develop close together often results in bad splitting



A very weak formation. Sooner or later the tree will split at this triple crotch and be ruined



(Lower center) Pruning and spraying the fruit trees for scale are both tasks for the winter



Young trees as well as old need constructive pruning. At this period the developing form of the tree is guided in the way it should go and its mature success largely determined



The thin, weak interior branches should be cut out. They bear little or no fruit, and during the growing season do much to obstruct that free air circulation so necessary to crop perfection

July

THE GARDENER'S CALENDAR

Seventh Month



To postpone its going to seed, shade the lettuce with slat screens



Another way of shading lettuce is to support boards along the row



Put poison on the cabbages before the worms get a start at them



The large tomatoes are best for the main crop

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>Today I have grown taller from walking with the trees. The seven sister-poplars who go softly in a line; And I think my heart is whiter for its parley with a star That trembled out at night-fall and hung above the pine. Karle Wilson Baker.</p>	<p>6. Keep the cultivator working steadily. Deep and frequent cultivation will relieve to a great extent the necessity of artificial watering. Be sure to work the ground after each rain so as to conserve the natural moisture.</p>	<p>7. Do not neglect the flower garden. Keep all the spaces between the plants well loosened up to admit air to the soil. The tall flowers, especially, should be staked, and when this is done, remove all dead stems.</p>	<p>8. Set out some plants of the late plants of cauliflower, kale, Brussels sprouts, celery, etc. Dig deep trenches for them, adding plenty of manure. Water the plants for several days or until they start to grow.</p>	<p>9. Why not sow cover crops on that waste land or in the orchard? This is the most economical means of soil restoration. Corn, rye, clover and beans are good for this purpose and make excellent summer cover crops.</p>	<p>10. The time the climbing roses should be looked over is after they have finished flowering. Some of the old woody shoots can now be removed at the base, and the lateral shoots can be reduced somewhat, improving their growth.</p>	<p>11. If you have fruit trees it would be greatly to your advantage to start now to get acquainted with summer pruning. This is the accepted method with fruiting trees and it should be attended to at this time to produce results.</p>
<p>13. The last sowing of corn should be made at this time. Use both the very early and medium varieties. Plant several rows quite close together so that in late fall they can be protected, if necessary. This will increase the amount grown.</p>	<p>14. Don't wait for blight to destroy your plants before you start spraying. Melons, cucumbers, tomatoes, celery and others soft plants are subject to blight and should be sprayed with Bordeaux mixture.</p>	<p>15. Rutabagas, beets and carrots for winter use should be sown now. Sow in the drills and thin out to the required distance. In dry weather look out for green flies, and if attacked, spray with tobacco solution.</p>	<p>16. After the outside roses have finished flowering, some attention should be given to the bed to improve the quantity and quality of the fall flowers. With a fork apply a liberal top dressing of bone to the bed as fertilizer.</p>	<p>17. This is an excellent time of year to look over the trees on your grounds. Any minor repairing necessary should be attended to. Paint all scars, remove all dead wood. Any trouble should be examined by an expert.</p>	<p>18. After the fruiting period is over the cane fruits should be examined very carefully. First remove all the old fruiting canes and then tie the new canes in position if care is taken. These will be your next year's producing canes.</p>	<p>19. Keep a sharp lookout for caterpillars of all kinds. All these pests are very destructive at this time of year, but there is little excuse for their damaging anything as they are easily destroyed. Most easily done with a torch.</p>
<p>20. What about some fall peas in the garden? Don't think because you failed the first time that it is not practical. Use manure in the trench and for good results use the round type of pea such as New York Market.</p>	<p>21. During the dry weather that usually prevails at this time, it would be an excellent plan to study the different types of irrigation. Sooner or later you will have one of these rain machines in your garden. Do it now.</p>	<p>22. This is the time of the year when the chrysanthemums in the greenhouse should have some attention. Frequent feedings with liquid plant foods are advisable. Use various materials so as to give a well-balanced food.</p>	<p>23. Cool nights and hot days are mildew and blight breeders. If the leaves are infested, they should be picked off and then the plants sprayed with a strong solution of copper. Sulphate of potassium is best for mildew.</p>	<p>24. What about next winter in the greenhouse? Now is the best time to start some of the vegetables for forcing. Cucumbers, tomatoes, mushrooms, New Zealand spinach, parsley, etc., give the best results.</p>	<p>25. The melon plants should be fed freely with liquid manures. First make some holes around the hills so that the material will reach the roots, then lay boards under the fruit. This will assure you much better melons.</p>	<p>26. The planting season is again here. Evergreens of all types may be moved now. Be sure to use plenty of water in this work, and where possible, spray the foliage in the evening for the first few weeks. Good results will follow.</p>
<p>27. Why not start a number of perennials from seed now? This is the economical method of raising these plants in any quantity. If you have no frame to carry them over in, they can be protected during winter with boards.</p>	<p>28. Carnations in the field must not be neglected. It is on the condition of these plants that the flower crop of next winter to a large extent depends. Cultivate the ground well and keep the plants pinched back.</p>	<p>29. Keep the runners removed on the strawberry bed. This is also an excellent time to set out new beds. If this is properly attended to, they should produce next season. Spray with Bordeaux if the leaves are blighted.</p>	<p>30. Some flowers for the greenhouse should be started now, such as stocks, calceolarias, cinerarias, calandulas, etc. These are but a few of the many flowers which can be started now for finishing in the greenhouse.</p>	<p>31. Sow several rows of beans rather closely together so they can be easily protected in case of an early frost. Use water in the drill to hasten germination, and keep the ground around the plants stirred deeply.</p>	<p>This Calendar of the gardener's labors is aimed as a reminder for undertaking his tasks in season. It is fitted to the latitude of the Middle States, but should serve the whole country if it be remembered that for every hundred miles north or south there is a difference of five to seven days later or earlier in performing garden operations.</p>	

THEY give a pajent, I think they calls it, over to East Ellsworth las' week, to celebrate the foundin' o' the village back in 1719. Some o' the rich summer folks started it, an' it must've cost 'em a pile, what with the rig-outs for the actors, the refreshments, an' all. They took it powerful serious, too, them New Yorkers, an' told us how we owed it to our great-granddads to show we ain't forgot all they done for us by startin' East Ellsworth. I reckon it don't make much diff'rence to them that's dead these hundred years an' more, whether we gives a pajent or not; but we likes to keep the summer visitors happy an' spendin' their money, so we says "Sure!" when they asked us. It was fun, too, after we got started. One day they was a sham fight with the Indians, an' I like to died a-laughin' at Hen Pilikins, with a tommy-hawk in one hand an' a scalpin' knife in t'other, a-whoopin' through the brush after old man Elkus, who was dressed up like one o' them Pilgrim Fathers. Hen he ain't much on looks even in his reg'lar clo'es, but fixed up as a Indian—wa'l, a hoss that seed him jes' took one look an' bolted. Mebbe them two ol' rascals couldn't git over the ground, too—the las' we seed of 'em they was a-headin' straight for the East Ellsworth House, an' goin' strong!

Old Doc Lemmon.



A nitrate of soda solution is good to stimulate the growth of the crops



Prune the flowering shrubs as soon as they have finished blooming



Staking and tying the tall flowers is a necessary protective measure



Flower pots under the melons will help their ripening



Young seedlings may be transplanted into boxes now. Keep the surface of the soil well stirred



All nests of the tent caterpillars should be burned. A kerosene torch, or paper, may be used



Apples and pears can be made to bear extra choice crops when grown in the greenhouse

Whether in flower or fruit, the peach tree trained to a trellis under glass has a distinct beauty



The possibilities of growing fruit under glass are only limited by the space one can give them

Grape vines are set 4' apart close to the wall of the house. The wires are 15" from the glass



Yes, these are melons, real muskmelons, greenhouse grown. The nets prevent the fruit dropping prematurely

THE ART of GROWING FRUIT UNDER GLASS



August

THE GARDENER'S CALENDAR

Eighth Month



Abundant watering of the roots is essential when evergreens are being planted



Gather and use the egg-plants while they are still young and full of juice



When the crop is over, dig the pea vines into the ground to enrich it



Slat stakes keep the runners of the bush limas off the ground

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>31. Buds will be forming on most of the greenhouse chrysanthemums at this time and strong feedings will be necessary if you want highest quality flowers. Also spray occasionally with tobacco preparation.</p>	<p>This Calendar of the gardener's labors is aimed as a reminder for undertaking all his talks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier</p>	<p>5. Flowers intended for cultivation in the greenhouse this winter should be started now. Seeds of various annuals such as stock mignonette and snapdragon may be sown, or small plants may be purchased.</p>	<p>6. Vegetables of the different forcing types may be started for greenhouse cultivation. Tomatoes, cauliflower, lettuce, spinach, parsley, beans, Swiss chard and New Zealand spinach are vegetables of easy culture under glass.</p>	<p>7. This is the time that special attention should be given to cabbage and other green vegetables on account of the leaf eating insects. The plants should be sprayed with arsenate of lead to destroy the insects.</p>	<p>1. Early celery should now be ready for use. Baking this with earth is not advised on account of the intense heat. It is best to use paper bleachers or boards for this purpose, blanching only in usable quantities</p>	<p>2. Late celery, cabbage, cauliflower and kale may still be planted. Use plenty of water when setting out these plants and make a habit of watering them twice daily until the plants show that the roots are established.</p>
<p>3. Strawberry beds may be set out at this time, which will bear a full crop of fruit next year. Make certain that both the perfect and imperfect types are planted. This will assure proper fertilization of the flowers.</p>	<p>4. Neglected ground that is intended for cultivation next year should be broken up. The proper forking or plowing with the subsequent harrowing will remove large quantities of the troublesome rye and twitch grass.</p>	<p>12. Bulbs for forcing in the greenhouse should be ordered at this time. Boxes, pans, soil and other necessary materials used in the forcing of these plants should be made ready, as some of these bulbs are available now.</p>	<p>13. New lawns can be seeded now. Failure with lawns is often due to the improper preparation of the ground and the meagre allotment of seed. Sow grass thickly, as this will help to choke the weed growth.</p>	<p>14. Hedges of all types, evergreens that have been confined to a form, and various plants that are clipped, should be gone over now as growth is about to cease. This will be the final clipping, and should be done carefully.</p>	<p>15. There is still time to sow some cool crops in the garden. Several sowings of peas should be made this month, also spinach, cress, radishes, lettuce, turnips, etc. If the ground is dry, water well before sowing.</p>	<p>16. The cane fruits should be looked over at this time. Old shoots on the raspberries and blackberries should be cut out entirely as these do not bear again. Young shoots for next year should now be tied firmly in place.</p>
<p>17. If you want high-grade dahlias blooms it will be necessary to keep the plants properly disbudded. This means a constant and consistent pinching of the young growth in order to reduce the number of buds.</p>	<p>18. Roses showing a substantial growth should be encouraged by top dressings of bone meal or any good fertilizing agent. Though it does not improve the quality of the fall flowers it gives the plant more vigor.</p>	<p>19. Don't let your flower garden run down. Keep the tall flowers staked and cut out all the dead flowering stalks. Keep the edges trimmed and stir the soil on the surface. This is as necessary now as in the spring.</p>	<p>20. If you have a greenhouse make up a compost heap of all plants. Use top soil with a good soil growth adding manure and bone meal and stack it up at a convenient point so that the green material will decompose.</p>	<p>21. This is an excellent time to go over and prune the shade trees, as it is easy to see how the work should be done. Remove the limbs very close leaving no shoulders, and paint the wounds carefully. Make cuts clean.</p>	<p>22. This is the time to build cold frames for the fall and winter. Brick or concrete is preferred but a substantial wooden frame will last some time. Next to the greenhouse the cold frame is the gardener's best friend.</p>	<p>23. After gathering the peach crop, spray the trees with Bordeaux mixture to keep the various foliage diseases in check. Trees afflicted with the yellows should be cut down and burned to prevent the spread of the disease.</p>
<p>24. It is advisable to have a small stepladder or at least a box to stand on in order to get at the top of the poles when picking limas or other types of pole beans. It is usually at the top that the greatest yield is found.</p>	<p>25. Crops that remain in the ground such as Swiss chard, parsnips, etc., should have a topdressing occasionally with a strong fertilizer to prevent them from becoming tough. Soluble fertilizers are more available.</p>	<p>26. Newly set out plants that are not growing satisfactorily can be stimulated into growth by application of nitrate of soda, sulphate of ammonia or other materials of this kind. After using these good results will be noticed.</p>	<p>27. Gather the onion crop now. When the tops have died down the onions should be pulled and left in the sun today; then the tops can be twisted off and the onions themselves stored in a dry cool place until ready for use.</p>	<p>28. Biennials such as foxglove and cup-and-saucer can be started from seed now. It is good practice to sow quantities of perennials now, carrying them over the winter in the cold-frame and setting them out in early spring.</p>	<p>29. Before cold weather look over the greenhouse, replacing broken glass, doing any necessary repair work. Be certain the boiler is in working condition, particularly in a greenhouse that was closed last year.</p>	<p>30. It is just as necessary to prune vines as it is other plants. All old and unproductive wood should be removed. This will give more room for the younger and more vigorous shoots. Now is the time for this work.</p>



Dry onions in the sun, then twist off the tops and store the bulbs for winter



By breaking some of the roots you postpone the seeding of lettuce plants



Foxgloves, campanulas and other perennials are started from seed sown now

SEEMS like this Prohibition idee ain't limited just to people—even the sky's been dry since the first o' July an' the crops is in a bad way all through the county. Makes me think of a piece in our last week's paper 'bout the Indians down New Mexico an' Arizona way, an' how they holds a kind o' sociable an' dance so's the element'll treat 'em right an' give 'em a good harvest. 'Course, we couldn't do nothin' like that up here, for the folks is all old-line Methodists, an' they wouldn't stand for no worshipping o' the sun an' the rain an' the south wind. But the idee ain't bad, I mean, the idee o' lookin' on the elements, the sun, moon an' stars, as sort o' gods rulin' our gen'ral well-bein'. To my mind they ain't no grander thing than the sun, nor more awe-inspirin' than a whackin' old thunderstorm at night, nor more helpful to a body's spirit than the stars, if ye'll really look at 'em. Call me an Atheist if ye want to, but I b'lieve they's a deal o' practical, workable religion, a lot thell help ye be a useful citizen an' a good friend, in the worship o' them Indians. It's kinder gettin' down to simple first principles, o' course, but it's sincere an' genuine—which some of our up-to-date religion ain't.

Old Doc Lemmon.



Do not fail to thin out those vegetables the seeds of which are sown directly in the garden rows



Seeds of cauliflower, lettuce, etc., for transplanting, can be started now in boxes in the greenhouse



Old advice, but good—keep the ground well cultivated

FRESH BERRIES — WITH CREAM

Wherein the Wares of the Howling Huckster and the Avaricious Fruit Store Man Achieve that Elusive Perfection Through the Medium of the Home Garden

IN the planning of even a modest kitchen garden the desirability of the small fruits—currants, raspberries, blackberries, etc.—is often overlooked. The thoughts of beginners especially are prone to center on vegetables, to the exclusion of the berries, which, while of perhaps less nourishing value, are nevertheless highly important articles of diet.

The requirements of these cane and bush fruits are not exacting. Any fairly sunny, well drained soil which will produce a good general vegetable crop will be suitable. Such necessary care as spraying, pruning, mulching, etc., is easily given and amounts to little

enough compared with that which the regular vegetable garden demands.

As soon in the spring as the ground is dry enough to crumble is the time to plant. The stock should be ordered, therefore, early; but before deciding what to get you should look the ground over carefully and decide exactly how much space will be available. In doing this the following planting distances should be kept in mind:

Raspberries ought to be planted 3' or 4' apart in the row; blackberries and dewberries, 5'; currants, 4'; gooseberries, 5'. If only a single row is to be planted, perhaps along a fence or at the edge of the garden, these figures will suffice. If, however, you decide upon two or more parallel rows, you must allow an average distance of 6' between the rows, to leave room for you to move about comfortably while attending to the cultivation, picking, etc.

All of the good nurseries supply varieties of small fruits in great numbers. It would be out of the question to set down here anything like a comprehensive list of these, but you will not go far wrong if you make your choices from the following:

Raspberries: The King (extra early); Cuthbert; Columbian; Reliance; St. Regis; Everbearing; Cardinal; Palmer (black); Golden Queen (yellow).

Blackberries: Mercereau (early); Early Harvest; Early King; Snyder.

Currants: Perfection; Fay's Prolific; Lee's Prolific (black); White Grape.

Dewberries: Premo (early); Lucretia. Dewberries ripen somewhat earlier than raspberries, but in other respects are quite similar to them.

Gooseberries: Industry (English variety well suited to our climate); Houghton's Seedling; Downing; Golden Prolific.

A liberal amount of well rotted manure dug into the soil where the plants are to go will prove a paying investment for higher quality fruit. For blackberries and raspberries, too, you must provide stakes or some other supports.



Heavy bearing bushes can result only when wisely selected and well cared for plants are used

Black raspberries should find a place in the small fruit border. Many prefer them to the red form



Unlike the true cane fruits, currants bear only on mature and thoroughly ripened hard wood

The best red raspberries, when grown at home, lack the somewhat pithy character of those in market



Blackberries, as well as raspberries, must have a supporting trellis to which the canes can be tied. A good one is made of stout wooden posts with connecting strands of heavy wire

September

THE GARDENER'S CALENDAR

Ninth Month



A garden bed where the late crops can be protected is a good investment



Good rutabagas must grow quickly. Nitrate of soda will stimulate them



Herbaceous plants may be moved more successfully in fall than spring



The last of the season's clipping of the formal evergreens may be done during September



The time is approaching to plant hardy bulbs outdoors



Start this month to hill up the late celery plants with earth



Lettuce may be planted in the cold-frame to yield a post-season crop which will repay the effort

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>September blowes softe Till the fruite is in the loft. —Old Proverb</p> <p>7. Do not stop cutting the grass until all growth has ceased. Failure to do this will result in a long growth, which when carried over the winter will turn brown in spring and be hard to eradicate when the lawn is put in order.</p> <p>14. This is one of the best periods of the year for seedling down new lawns, the reason being that most weed growth is over and the grass will get sufficient start to carry it safely through the trials of winter weather.</p> <p>21. Do not neglect to sow down with rye and clover the vacant patches in the garden. Sowings can also be made between corn, cabbage and other crops, with the idea of remaining after these crops have been gathered.</p> <p>28. Wire grass, rye grass and other heavy growing grasses and weeds grow very rapidly at this season of the year, and if allowed to overrun your garden they will be a serious factor to contend with next spring.</p>	<p>1. The last sowing of peas should be made the early part of this month, using only the hard round-seeded type, which is quick and vigorous in growth. If the ground is dry, water the drills well before sowing the seed.</p> <p>8. Melon frames and other garden accessories that will not be used again this season should be repaired, painted and put away in winter storage. When well cared for they will last for several seasons of actual use.</p> <p>15. Onions, parsnips, spinach and hardy crops of this character may be sown in the open with the idea of carrying them over the winter. This can be easily done with a little protection, such as salt hay or similar material.</p> <p>22. Celery should be banked with earth now. It is best if this is attended to frequently, as the soil should never be allowed to work its way into the heart of the plant. Hold the stalks together while banking them.</p> <p>29. A great deal of our so-called winter losses, especially with evergreens, is the result of these plants being allowed to become bone dry at this season when they are developing a root system to carry them over winter.</p>	<p>2. Prune all deciduous trees before the leaves fall, as it is much easier then to determine what part of the growth is to be removed. Cut the branches close, leaving no stubs, and paint the wounds immediately.</p> <p>9. Vegetables should be started in the greenhouse now for next winter's use. Cauliflower, lettuce and string beans should be sown about every three weeks. Tomatoes and Swiss chard need but one sowing.</p> <p>16. Evergreens that are being transplanted now, or have been transplanted recently, must be kept well watered. Although top growth has terminated, these plants are making considerable root growth even now.</p> <p>23. Mushroom beds may be started in the cellar at this time. Be sure to get fresh droppings for this purpose, and by all means use new culture spawn, which is of high quality and the most dependable.</p> <p>30. It would not be amiss with late growing crops such as celery, rutabaga, carrots, parsnip and New Zealand spinach, or other crops still bearing, to apply frequent dressings of manure and occasionally nitrate of soda.</p>	<p>3. Do not neglect the cane fruits, if they have not already been attended to. Go over them carefully, removing the old canes at the ground line and tying the young, vigorous shoots into position to prevent damage by storms.</p> <p>10. This is peony month in the flower garden. If you want good results next year, it will be necessary to overhaul the plants now, digging up the clumps that are too large, cutting them into four pieces and re-setting.</p> <p>17. Permanent pastures for grazing purposes should be sown at this time. Bear in mind that if properly put down, a good pasture will last for many years. Do not under any circumstances plant inferior seed.</p> <p>24. Cold-frames that can be protected throughout the winter should be used for sowing hardy vegetables like cabbage and cauliflower with the idea of carrying them over and planting out early in the spring.</p>	<p>4. It is not too late to start a strawberry bed for next season, if potted plants are used for planting. Use pistillate and staminate types. Put in plenty of manure and a fair amount of bone meal to stimulate strong, rapid growth.</p> <p>11. Where heated frames are available for them, there are a number of crops that can be started at this time. Radishes, spinach, etc., or some of the cooler flowers such as violets and pansies, can be sown in the frames.</p> <p>18. Attention should be given now to bulb planting for this season. If not already placed, orders should be sent immediately, as early planting means better results. It gives the bulb a chance to form a root system.</p> <p>25. It might be advisable to build a fire in the greenhouse occasionally. Cold nights and hot days are productive of mildew. To overcome this have the pipes painted with a paste made from flowers of sulphur and water.</p>	<p>5. The orchard that is not growing satisfactorily can be improved wonderfully by the sowing of cover crops, and subsequently turning them under as described on another page. No orchard should be grown in sod.</p> <p>12. The flower garden should be given a final clean-up for the season. The walks should be neatly edged, all weed growth and the old stalks of plants removed and burned. This will destroy many insect larvae.</p> <p>19. Carnations that were planted out may now be put in the greenhouse. The glass should be shaded slightly for several days, or until the roots have again become active. Overhead spraying is helpful.</p> <p>26. Before the leaves begin to fall, look the garden and grounds over carefully with an eye to changes in their arrangement. The reason for this, and how to go about it, are detailed on another page in this issue.</p>	<p>6. Evergreens that have been confined in growth, hedges and various other plants that are frequently should be given a final clipping at this time. Do this before the foliage turns on the deciduous plants.</p> <p>13. Do not neglect to get cuttings of the bedding plants before they are destroyed by frost. This applies to chrysanthemums, coleus, etc. Each variety should be kept separate, as mixed colors are disappointing.</p> <p>20. Chrysanthemums and other similar plants that are in bud should be fed freely with liquid manures of different kinds. This operation, however, must be discontinued as soon as the buds show color and signs of opening.</p> <p>27. Just as soon as the foliage turns yellow on deciduous plants it is safe to start transplanting; in fact, the earlier in the fall this is attended to the better, as the roots will take hold before cold weather.</p>

O'er yon bare knoll the pointed cedar shadows Drowse on the crisp, gray moss. —Lowell

This Calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.



Sweet peas for winter bloom in the greenhouse should be planted now



Gathering rutabagas that have attained the proper size and best quality

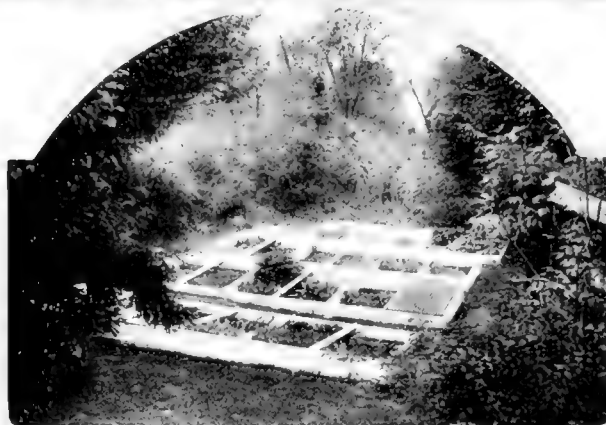


Boards held with stakes may be used in blanching the early celery crop

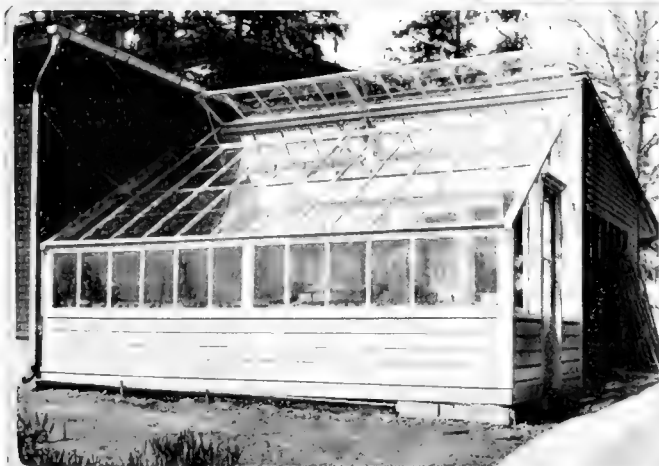
FOR THE FLOWERS THAT GROW IN HEAT



The small greenhouse can often be built-on if its architectural treatment conforms with that of the dwelling. In such cases it is heated by an extension of the regular house system



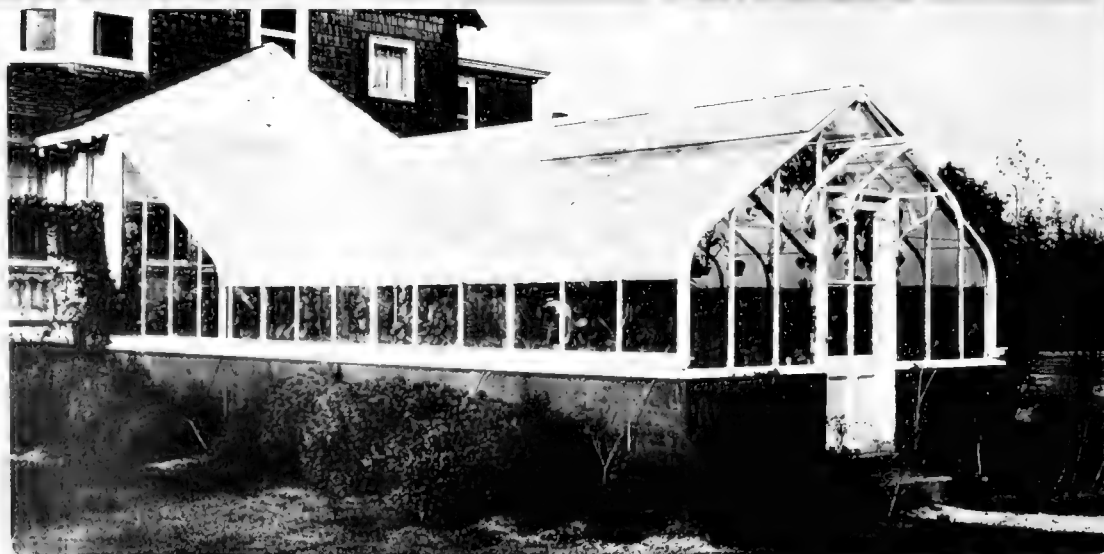
Cold-frames derive their stimulating warmth from the sun's rays. Young plants started in the house are moved to them for "hardening off" preparatory to setting in the open garden



A simple type of lean-to greenhouse, showing the proper type of ventilator. For best results, the lean-to should be heated at night and on cold, cloudy day



The lean-to above is built against a concrete wall. It is partly sunken and faces the south, to catch and hold the maximum amount of sun warmth



A regular greenhouse, even though small, can be adapted to growing any kind of hothouse plant. This is a "unit" house and can be added to if more space is desired

October

THE GARDENER'S CALENDAR

Tenth Month



Carrots and other roots should have their tops removed before storing



Changes in the perennial flower border should be made during this month



If the last clipping of evergreens has not been finished, there is still time



Label the gladioli bulbs before storing them away for the winter

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>This Calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.</p>						
5. The first few days in the house are the critical period for indoor plants. Use great care in watering and keep the foliage sprayed or moistened. If the plant dries up too quickly, plunge the entire pot in a pail of water.	6. In case of a severe frost being threatened, it is wise to cover the flowers of outdoor chrysanthemums with paper or other material at night. This will prevent their being damaged and add to their life.	7. Dig up and store all tender bulbous plants such as gladioli, dahlias, etc. These must be stored in sand or sawdust in boxes and kept in a cool cellar. Dryness of packing material and surrounding air is essential.	8. Hay thrown over tender garden crops such as eggplant, peppers, lettuce will protect them from damage by light frosts. It must be removed during the day and applied only at night. Do not use enough to break them.	9. Celery must be kept hilled. Hold the stalks together tightly with the hand to prevent dirt from getting down into the heart. Keep hilling as they grow, since it is contact with the earth that gives celery flavor.	10. Cauliflower just starting to head up should be belifted very carefully and placed in frames where it will mature properly. The plants may also be planted in tubs and moved to a barn, garage or other frost-proof place.	11. Why not have some fruit trees around your garden, preferably on the north side? Or perhaps you have room for a small orchard. This is the proper time to set the trees out, except the plums, cherries and other pit fruits.
12. Start mulching rhododendrons with leaves or manure. This is not only for the purpose of protecting the roots, but it will also furnish the plants with considerable nourishment. In the spring the leaves may be dug under.	13. All shallow rooting crops should be afforded protection of a winter mulch of manure. This applies to strawberries, raspberries, blackberries, etc. With strawberries, manure should not touch the crown.	14. This is an excellent time to put into execution any changes in your garden, such as sod borders, dwarf hedges, trellises for fruit plants, changes in watering systems, etc. A good map of the grounds will help.	15. The plantings of new trees may be attended to at this time. With the dry summers which have prevailed for the past few years, fall plantings will give better results than where work of this sort was done in spring.	16. What about some bulbs for house forcing to bloom about Christmas time? Paper whites, Pott-baker tulips, narcissus and various others may be grown successfully in the house.	17. Don't neglect successive sowing of the vegetable crops planted in the greenhouse. Lettuce, cauliflower, spinach, radishes and beans require seeding about every two or three weeks in order to insure a supply.	18. Stop feeding the chrysanthemums just as soon as the buds show color. It is a good practice to shade the greenhouse slightly. This will give considerably longer petals and larger flowers.
19. Any changes in the flower borders should be made now, as the different types of flowers may be easily determined at this time, even by the beginner. Old plants that are not yielding should be divided.	20. Carrots, beets and other root crops should be gathered and after the tops are removed they can be stored in trenches outdoors, or in a cool cellar. If stored outdoors, they should be protected from the frost.	21. A few roots of parsley, planted in pots and placed on the kitchen window-sill, will keep any ordinary family supplied with an abundance of this valuable green for garnishing and other kitchen uses all winter.	22. Don't neglect to mulch heavily with manure or any loose material, all evergreens that have been transplanted during the current year. The first winter is the critical period with these trees, and they need care.	23. Start now to collect all the old leaves, bringing them to one point. Do not ever burn them, because, when rotted, they are one of the best of all fertilizing material. Store them in some obscure, sheltered corner.	24. Don't forget to plant a few of the more hardy types of narcissus in some secluded corner where they may go on naturalizing and spreading by themselves. In a few years enormous masses are possible from small plantings.	25. Shut off and drain all irrigating systems and other exposed plumbing pipes, and empty concrete pools, etc. All faucets should be left open to assure proper drainage of the piping. If they freeze they will burst.
26. Potatoes and other root crops stored in the cellar should be looked over occasionally to prevent damage by decay. Remove all decayed or soft, spongy tubers, because they are sure to infect other sound ones.	27. Hydrangeas, bay trees and other decorative plants in tubs and boxes should be stored away for the winter. A good cellar which is not too warm and is fairly light makes a good storage place for this class of material.	28. When husking corn, any exceptionally fine ears should be set aside and saved for seed next year. The ears should be hung up in some dry place where the mice will not be able to reach them. Suspending by wire is good.	29. After the foliage falls all fruit trees and other deciduous trees subject to the attacks of scale should be sprayed with any of the soluble oil mixtures. Lilacs are especially susceptible to attacks of the scale pest.	30. This is an excellent time to destroy any aphids which may be on the white pines and other evergreens. A thorough spraying with a strong tobacco and soap mixture will free them this pest.	31. Arrangements should be made to protect the roses, the best method being to do them up in straw overcoats. In addition to these, earth should be banked around the plants so as to throw the water away from them.	I love to see a bough across the moon When, like a scarlet lantern of Japan, Low in the east it hangs Pendulous, obscured, and dim. William Douglas

It makes me smile sometimes to hear city folks talkin' 'bout how they'd like to go to farmin'—"it's such a easy, restful life!" Durn few of 'em seems to realize that a real farmer gits up at four-thirty or five A. M. the year 'round, an' works till dark. Sure, I'll 'low they's breaks durin' the day—restin' the team when y'e plowin', settin' by the spring under the big maple an' wipin' off the sweat when hayin' time comes, talkin' crops an' politics 'side the road when the R. F. D. feller comes with the mail. If 'twarn't for them interruptions I don't b'lieve us farmers could git along; we got to have some change from hoein' potatoes an' hollerin' "WHO-A!" An' daggone it, a man needs a chanct once in a while to chew on a straw an' calc'late. They's lots o' things to stop an' figger on—how much of a cut to make in the woodlot next winter, when the drought's a-goin' to break, whether them two Holstein heifers o' Jake Hopper's is really worth a hundred apiece, or who's to be the next postmaster now that old Bill's dead an' gone. Reckon mebbe it's because they sees us a-chawin' an' calc'latin' an' a-gossipin' round the sand box in the store at the Corners that city folks think we ain't got much work to do, or else are just plumb lazy. But just let 'em try fermin' onct, thetselfes!

—Old Doc Lemmon.



Dig up and store all the tender bulbous plants such as can-nas, dahlias, etc.



Bulb planting should be started now, and continued until frost comes



The root crops can be stored in boxes and covered with dry sand



Greenhouse work gets under way this month, in preparation for the winter blooming season. The sweet peas should be kept cultivated



The collecting and saving of autumn leaves should not be overlooked. When rotted, they make excellent mulching and fertilizing material



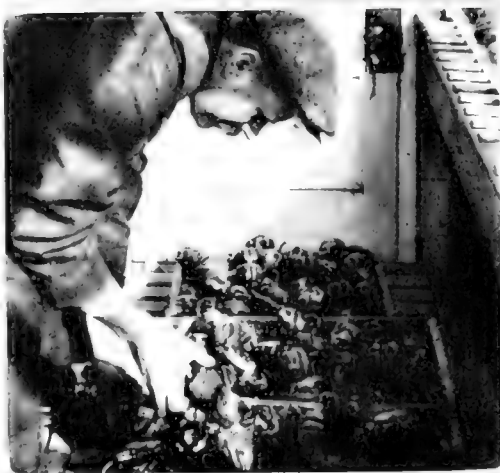
Dahlias, too, ought to be clearly labeled when taken from the ground



A dry trench will protect the cabbages if they are turned head down and covered with earth

The larger root crops may be packed quite closely in an outdoor trench and protected with hay

Before storing the roots in trench or cellar, break off their useless tops and discard them



Green peppers need no packing material. Simply store them in shallow boxes or on a shelf



Wrapping tomatoes in paper will enable you to keep them indoors for several weeks

WINTER BEDS for SUMMER CROPS

Another method of keeping tomatoes for fall and early winter use is to pack them in hay



If dry earth is used in the storage of parsnips there will be less shriveling of the crop



November

THE GARDENER'S CALENDAR

Eleventh Month



The grass in the orchard should be burned to destroy insect eggs, etc.



Now is the time for the final cleaning up of all garden and grounds trash



Whatever changes are uncompleted in the perennial border should be made



A well developed bulb with the roots spread, ready to force for winter bloom indoors

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>30. All ornamented garden furniture, settees, etc., and all melon frames, bean poles, tomato trellises and such planting accessories, should now be stored away for winter. Paint those that require it.</p> <p>2. It is now time for all fall bulb plantings to be completed. Always plant four times as deep as the diameter of the bulb, mound the earth up so as to shed water, and mulch the surface well with manure.</p> <p>9. Carnation plants should be kept supported and properly disbudded. Never allow the benches to accumulate green mould. The surface of the ground should be kept stirred. Top-dress with sheep manure.</p> <p>16. Primula, cyclamen, clematis, and other potted plants that are customarily grown in frames may be boxed off inside now. Frequent feeding with liquid manure is very helpful to their continued success indoors.</p> <p>23. Apples, pears and other stored fruit should be looked over occasionally for any decayed ones which would soon destroy others. When the fruit is wrapped separately in soft paper this danger is lessened.</p>	<p><i>I saw old Autumn in the misty morn Stand shadowless like Silence, Listening To silence, for no lonely bird would sing Into his hollow ear from woods forlorn, Nor lowly hedge nor solitary thorn;— Shaking his languid locks all dewy bright, With tangled gossamer that fell by night, Pearling his coronet of golden corn.</i> —Thomas Hood.</p> <p>3. Garden changes should be made now before the ground is frozen, to prevent settling and other irregularities in the spring. Plants disturbed now are more likely to live than those moved in midwinter.</p> <p>10. Sweet peas sown now and properly protected over the winter will give quality flowers next year. A frame made of boards and covered with manure after it is put in place will be an excellent protection.</p> <p>17. Tender roses and all tender shrubs should be strawed now to protect them. Putting earth around the bases of the plants helps shed water and will serve to protect the lower part of the plant from damage.</p> <p>24. At this time all hard-wooded forcing plants such as lilacs, cherries, deutzia, wisteria, etc., should be lifted from their places about the grounds and placed in tubs or boxes for winter forcing.</p>	<p>4. Do not neglect to make successional sowings in the greenhouse of vegetable crops such as beans, cauliflower, beets, carrots, lettuce, etc. The secret of success is sowing in small quantities and frequently.</p> <p>11. If you have not already stored your root crops for the winter, they should be attended to at once. Burying them in trenches outdoors with the proper kind of protecting material is the ideal storage.</p> <p>18. Manure for the garden should be purchased now. For garden purposes it improves greatly with age and handling, and it is always possible to get manure in the fall, while next spring is uncertain.</p> <p>25. Young fruit trees had better be protected now from the attacks of field-mice, rabbits and other rodents which girdle the trunks. Tarred burlap or paper collars placed above ground will help.</p>	<p>This Calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.</p> <p>5. Ill-kept gardens breed diseases and insects. Clean up all refuse and burn the stalks and other material likely to decay. Thoroughly sterilize the ground by the application of lime or deep, consistent trenching.</p> <p>12. There are a number of popular perennials which should be protected. Clumps of coreopsis, bleeding heart, Shasta daisy, dicentra, etc., may be lifted, potted, and then stored outside to ripen properly before forcing.</p> <p>19. Standard roses are among the hardest garden subjects to protect. If strawed in they must have heavy stakes or they will be come top-heavy. Laying the stems down and covering with earth is the best.</p> <p>26. Boxwood and other tender evergreens should have their winter protections applied now. Burlap covers that are supported so as not to come in actual contact with the plants are the best material for this.</p>	<p>6. Poinsettia, lilies and other heat-loving crops intended for Christmas bloom must be forced rapidly. A temperature of 75° or even 80° when plenty of moisture is available, will be beneficial to them.</p> <p>13. Celery must be kept banked properly to protect the hearts of the plants from damage by severe frost. In fact, it can be stored in trenches any time now for use during the late fall and winter months.</p> <p>20. Freesias, French grown narcissus, early lilies and all bulbs of this type can be brought into a higher temperature now. After the buds show, free applications of liquid manure will benefit the roots.</p> <p>27. Low spots in the lawn or irregularities in the surface may be top-dressed now to overcome these troubles. Use good soil, and when not more than 2 inches of it is applied the grass will come through all right.</p>	<p>7. It is perfectly safe to plant asparagus in the fall provided you make some effort to protect it during the winter. Pull plenty of earth up over the plants and cover them well with decayed manure.</p> <p>14. Gooseberries, currants, raspberries and blackberries are surface rooters. A heavy winter mulch of manure will build up the fertility of the soil and help to protect the roots from damage by the frost.</p> <p>21. House plants of all kinds should be given a little extra care at this time. Sponge the foliage with soap solution, scrub the green scum off the pots and top-dress the soil in them with sheep manure.</p> <p>28. Rhododendrons should have their roots protected by a heavy mulch of leaves or litter. Some branches of pines or other evergreens thrust into the ground between the plants will prevent sun-scald.</p>	<p>1. It is not too late to start seeds of some of the more rapid-growing annuals in the greenhouse for winter flowers. Of these may be mentioned calliopsis, candytuft, ragged sailor and the ever popular mignonette.</p> <p>8. The strawberry bed should be mulched with well-rotted manure; this not only protects the plants but prevents the deterioration of the soil. Straw to protect them from the sun should be added.</p> <p>15. One of the hardest plants to protect during cold weather is the French Globe artichoke. If covered too much it decays, so use a frame to prevent the covering material from actually resting on the plants.</p> <p>22. Sweet peas in the greenhouse should be fed freely with liquid manures. The first flowers to appear should be pinched off to conserve the plants' strength. Keep the atmosphere dry at night.</p> <p>29. Most smooth-barked trees and practically all fruit trees are subject to the attacks of San Jose scale. These trees should be sprayed with one of the soluble oil mixtures which can be purchased.</p>



Liming the garden in the fall will improve the productivity of the soil



Dead vines from the vegetable garden may be added to the compost heap



When the bulbs are well rooted they can be brought into the house

DOWN in the medders back o' my barn they's a kinder swampy corner, all hummocky an' full o' ev'ry sort o' long grass, which fair turns blue with fringed gentians in the fall. For a couple o' weeks, if the hard frost holds off, 'Liza goes down there ev'ry few days an' picks a pitcherful, but we never gets tired o' 'em. They's so durned purty an' blue—same as the sky; an' they's about the last o' the year's wild flowers, too, 'cept a stray violet here an' there. Them late violets is the blue kind, if ye'll notice—I reckon that's the November wild flower color, somehow, same as they's others for the other seasons. In the spring it's white an' yaller, pink an' light blue, mostly, like the weather. Then as the sun gets hotter the colors change an' come stronger an' deeper, 'til along in August ye see the scorchin' red o' the cardinal flowers. After that they begins to cool off ag'in; more yallers, the blues an' purples o' the asters, the browns o' the grass an' leaves, an' fin'ly a patch o' blue at the very end. Blue's a good color any time—soft an' restful like an' cool. But they ain't no blue quite as good as them little fringed gentians down in my swamp medder, with the rusty dead grass all 'round an' the dark green cedars along the fence.

—Old Doc Lenmon.



A good bonfire of the odds-and-ends such as cornstalks, dead branches, etc., is a great help toward general garden cleanliness and insect pest control



Burlap covers should be placed over the boxwood as winter protection. These bushes are not really hardy north of New York



Succession plantings of beans are now in order in the greenhouse. Plant in rows 2' apart

THE LAST RITES *for* THIS YEAR'S GARDEN

Putting on the Winter Mulch, Cleaning Up the Odds and Ends, and Generally Preparing the Grounds and Planting Plots for Freezing Weather

and which will give him many good pointers for the more artificial work to be done at home. Hardly a move that Nature makes in swamp, field, woods or by the roadside that does not hold a kernel of information for the open eye. And that, of course, is the only kind of an eye for a good gardener to carry about with him!

There is, however, one thing in which the gardener can make a decided improvement on Nature's methods: that is, in the matter of garden sanitation. For the old Dame herself does not worry much about insects and diseases, trusting rather to the survival of the fittest to keep things going. What the gardener may think the fittest from his point of view, however, is often the vegetable or flower which proves especially susceptible to injury from these sources. Therefore, if he would succeed with them, artificial assistance is necessary—and cleanliness has proved as desirable in the garden as it is in the home. The great majority of insect and disease troubles are carried



Jackets of clean, long rye straw tied about tender roses will protect them from winter injury

WHEN every frosty morning finds fewer leaves clinging to the already barren looking trees, and fewer of the garden's last lingering flowers, it may seem to the uninitiated that Nature has about completed her year's work; that things are drawing to a close and that there is little or nothing more doing.

But "things are not what they seem." For every leaf that drops, you will find, if you look closely, a new bud dwelling under the little brown overcoat that will protect it through the winter. And down under the fallen leaves that have blown about and caught in masses among the dead stalks of the biennials and perennials, and in every nook and hollow in woods and swamp, you will find old roots or little seedlings a few weeks old, or bulbous plants such as Jack-in-the-pulpit or Solomon's Seal and the tropical looking "skunk cabbage," tucked away safely for the winter. Every hedgerow and field is full at this season not only of interest but also of information; of lessons which the wideawake gardener can hardly help taking to heart.

The winter ground mulch is a necessity for many shrubs to prevent alternate freezing and thawing



Evergreen bough as a winter protection for perennial beds or even shrubbery plantings can often be used. They should be placed on the south as well as the north sides, to prevent premature thawing



Do not apply the mulch until the ground is frozen. Its purpose is to protect from sun, not cold



With slender evergreens, much of the breakage caused by snow can be avoided by tying

over from year to year in the form of dormant or hibernating life or in eggs or disease spores that find a lodging in the fallen leaves or the old stalks, flowers or fruits in the garden and scattered around the grounds.

One of the most important things to be attended to, therefore, in the final garden clean-up is to make a careful search for any traces of disease and for every possible hiding place for hibernating insects. All suspicious material should be carefully gathered up and burned. One of the greatest mistakes that can be made is to use all the late garden refuse indiscriminately for the compost heap, as is often done. A general fall pruning, with such sanitation in view, will often prove a great help in controlling diseases of all kinds. It will not take long to go over the fruit and ornamental trees, shrubs and other woody growths, and cut out and burn all suspicious looking branches.

After the ground freezes the winter mulch of dead leaves, straw or well rotted barnyard manure should be applied to the perennial plantings.

December

THE GARDENER'S CALENDAR

Twelfth Month



The interior twigs and small branches of the peach trees should be thinned out



A thick covering of leaves will prevent frost getting into the celery trenches



All nests of caterpillars and other harmful insects should be destroyed now



Chicory is one of the few vegetables which can be grown under the greenhouse benches or in the cellar of the dwelling



Bulbs for indoor bloom should be forced in the dark for at least two weeks before bringing them into the light



The general rule is to save the dead leaves for mulching, etc., but if they must be burned, spread the ashes on the lawn

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>I stood and watched by the window The noiseless work of the sky, And the sudden flurries of snowbirds Like brown leaves whirling by. —Lowell.</p> <p>7. Trees that are subject to scale insects of various kinds should be sprayed with one of the soluble oil mixtures. Fruit trees of all kinds, roses, evonymus, and all smooth-barked trees are susceptible.</p> <p>14. Asbestos torches, or torches made of burlap and soaked in kerosene to make them inflammable, should be used to go over all the trees and destroy wintering over nests of caterpillars and other pests.</p> <p>21. Melon frames, tomato trellises, garden seats and other wooden garden material should be painted. Use good paint, and where necessary apply two coats. This is considerably cheaper than constant renewals.</p> <p>28. Fruit trees, and especially small ones, should be protected from rats, rabbits and other rodents. Ordinary tar paper wrapped around the stem from the ground to a height of 15 inches is sufficient.</p>	<p>1. All tender evergreens that require protecting should be attended to once. Pine boughs, corn stalks and other coarse material can be used to prevent sunscald. Manure mulches are best for the soil.</p> <p>8. All the garden tools and implements should be thoroughly cleaned, should with a cheap oil and put away for the winter. Those that are in need of repair should be attended to now while outdoor work is slack.</p> <p>15. Successional sowings of those crops in the greenhouse that require it, such as lettuce, beans, cauliflower, spinach and radishes, should be made. Rhubarb and endive may be started under the benches.</p> <p>22. Ferns, palms and other house plants should be top-dressed occasionally with some of the concentrated plant foods sold for the purpose. Keep the surface of the soil loosened so that no green scum forms.</p> <p>29. The planting of deciduous trees and shrubs may be continued just as long as the weather permits. Mulching heavily immediately after planting will prevent the penetration of frost if it should come soon.</p>	<p>2. All the various types of bulbs for winter bloom may be forced in the greenhouse now. It is best to bring the bulbs into the heat in small quantities so as to keep a continuous supply of blossoms coming along.</p> <p>9. Grape canes can be cleaned up and pruned at any time now. It is a good practice to remove all the loose bark and wash the canes with a good strong soap insecticide or spray them with an oil spray to destroy larvae, etc.</p> <p>16. Rhubarb may be forced in the cellar or attic of the dwelling by planting good-sized clumps in barrels or boxes and placing them beside the furnace or chimney. The soil should be kept moderately moist.</p> <p>23. The foliage of house plants must be kept free of insects. Sponging the leaves with a soap solution to which a good tobacco extract has been added will destroy white scale, red spider and green fly.</p> <p>30. Mushroom rooms may be grown in any ordinary cellar; the important point is fresh stable droppings for the bed. Don't let them ever get really dry. Use new culture spawn, as it is more certain than the old kind.</p>	<p>3. Hyacinths, Chinese sacred lilies, paper-white narcissus, Soleil d'Or, etc., may now be forced in bowls of water for the house. Place the bulbs in the cellar for about two weeks after planting so as to form roots.</p> <p>10. If cold weather prevails it is well to look over the vegetable trenches to make sure that the frost is not getting in and injuring the roots. Plenty of leaves piled on top is the best protection for the winter.</p> <p>17. Nectarines, peaches and grapes which are forced under glass should be pruned and cleaned with strong insecticides. Remove some of the top soil afterward and replace it with fresh earth.</p> <p>24. Chicory is one of the best winter salad plants. It can be forced in any ordinary cellar by planting the roots in boxes and keeping them dark. They can also be grown outside in trenches filled with hot manure.</p> <p>31. Poor lawns should be top-dressed, using a compost made of screened top soil with about 20 per cent bone meal and wood ashes added. This may be applied to the lawn liberally now, with some grass seed.</p>	<p>4. All new plantings should be heavily mulched with manure. This not only serves to protect the plants by reducing the penetration of the frost, but increases the fertility and productivity of the soil as well.</p> <p>11. Frames in which semi-hardy plants are being wintered, or frames that are used as growing mediums, should have some kind of covering. Loose hay may be used, but the best covering is jute mats.</p> <p>18. Plants that are growing in benches, such as carnations, roses, antirrhinum, etc., should be mulched with cow manure or soil made of equal parts of top soil and well-rotted manure with a little bone meal added.</p> <p>25. The value of the landscape departments maintained by the big nurseries should not be overlooked. They are prepared to plan all sorts of plantings for you and submit figures of costs, etc.</p>	<p>5. Do not neglect to provide for those friends of the garden, our birds, feeding boxes may be placed where the birds will be out of the reach of cats. Suet tied to the branches is attractive to several species.</p> <p>12. Look over the tender bulbs that are stored for the winter, such as dahlias, can-lus, gladioli, etc. Frost will surely destroy them, while too much heat or moisture will start them into growth before planting time returns.</p> <p>19. Boxwood must be protected, else it is very apt to winter-kill. Burlap covers, corn stalks, pine boughs or any material that will keep out the sun but admit air may be used for this purpose. Apply it now.</p> <p>26. This is the time to plan and even install some sort of irrigating system in your garden. Don't wait until summer for dry weather is just as sure as taxes and you had best be ready for it well in advance of its arrival.</p>	<p>6. Low spots in walks and drives that are invariably wet should be raised to shed water; or if the earth is taken out and the road bed filled with cinders it will help to make them dry and passable in bad weather.</p> <p>13. Do not scrape the bark on trees to destroy insect pests—it is impossible to get into the crevices where insects hibernate, and in many cases the tree is injured by removing the green outer bark. Use stiff brush.</p> <p>20. At this season of the year it is necessary to fertilize indoor cucumbers and tomatoes to assure fruit. Collect the pollen in a spoon and distribute it to the other blossoms with a camel's hair brush.</p> <p>27. Vegetables of all kinds that are stored in cellars should be looked over with the purpose of removing any decayed tubers there may be. A few bad ones will soon cause considerable damage to the rest.</p>



Tree planting may be continued late into the fall. Only solid freezing stops it



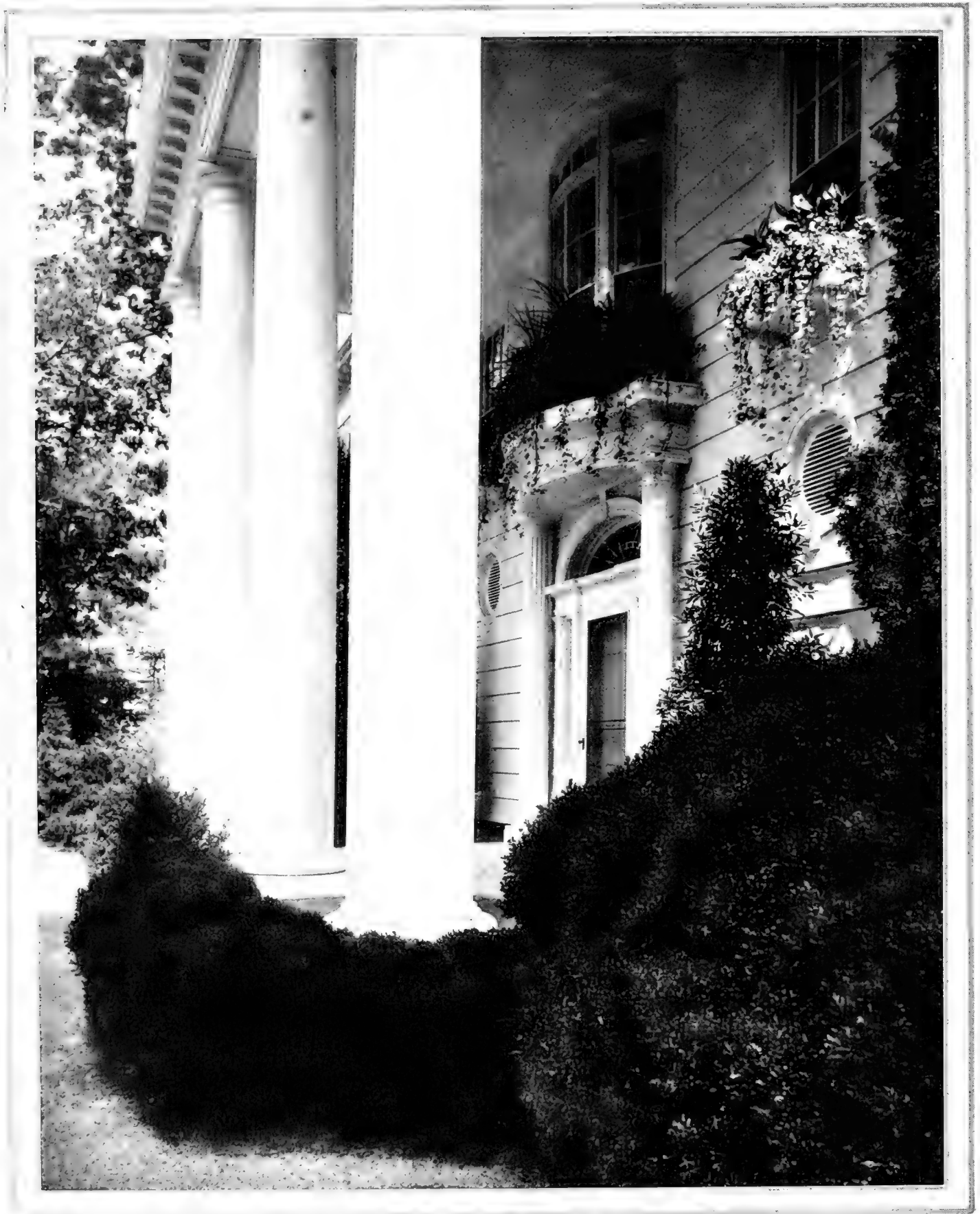
To insure fertilization of greenhouse tomatoes the pollen is transferred with a brush



A spade is used to lift and divide the root clumps of various perennial flowers

'P'EARS to me like Chris'mas in the city must be a kinder gloomy time 'side o' what it is out here in the country. I hear as how they ain't no sleighs no more in the big towns like N' York, Boston an' Chicago—only autombiles, an' subways, an' the like o' that. Shucks!—what's Chris'mas without sleigh-bells a-jinglin', an' snow all while an' sparkly along the road, an' big birch logs a-roarin' in the settin' room fireplace? Somehow I reckon city folks must find it kinder hard to git real Chris'masy when all they can see out their winders is rows an' rows o' stone houses all just the same, gutters full o' dirty gray slush, an' pavements all wet an' sloppy without even a foot o' clean snow with a rabbit track runnin' across it. Chris'mas ain't no day to spend indoors, nor to wade in mud when ye go out. It's a day to go sleigh-ridin', or skatin' on the ice-pond, or zippin' down Kellogg's Hill on a big twelve-passenger bobbed, with somebody standin' at the Corners to keep teams from turnin' in sudden from the side road just as ye come kitin' along. Yes, an' by crickey Chris'mas ain't the time to wear your bes' clo'es all day, neither; fer a couple o' hours, anyway, ye want to wear felt boots, an' a fur cap with ear-muffs, an' a pea-jacket, an' a red muffler, an' mittens—good thick woolen mittens with wristlets to 'em.

—Old Doc Lemmon.



THE CHARM OF OLD BOXWOOD

Boxwood has been called the aristocrat of shrubs. Certainly it has the mellow charm that one associates with an old aristocrat. We associate it with the old-fashioned garden. Today it is in constant demand for giving dark, low accents to a lawn or, as in this instance, for helping to reconstruct the atmosphere of a country resi-

dence in the Georgian style. Old boxwood commands the high price commensurate with its scarcity, but into many gardens, where price is not considered, whole hedges and plantings of box are moved from old gardens. The box planting here is on the place of Mrs. J. W. Harriman, at Brooksville, L. I. Alfred C. Bossom, architect

HOUSE & GARDEN'S GARDENING GUIDE



A Condensed Ready Reference for the Year on Culture and Selection of Vegetables, Flowers and Shrubs and for Planting, Spraying and Pruning



SHRUBS FOR EVERY PURPOSE

SHRUB	COMMON NAME	HEIGHT	COLOR	SEASON OF BLOOM	DIRECTIONS
For Masses and Borders					
Buddleia Calycanthus Floridus Clethra Deutzia Exochorda grandiflora Forsythia Lonicera tartarica	Butterfly shrub Strawberry shrub Sweet pepper bush Deutzia Pearl bush Golden Bell Tartarian Honeysuckle	6'-8' 4'-6' 5'-7' 4'-6' 5'-6' 4'-5' 4'-6'	Pink, lilac, violet Brown White White, pink White Yellow White, pink, yellow, red	July to frost May July-Aug. June May-June April May-June	A new flowering shrub, but one of the best; sunny position and fairly rich soil. Flowers are delightfully fragrant. One of the best of the smaller shrubs; very fragrant. Very free flowering; a great favorite for grouping. Good for cutting; best effect obtained through massing with other shrubs; charming flowers. Large yellow flowers blossom before the leaves appear. Most striking when clumped; strong grower; free blossoming.
Philadelphus Prunus Rhus Ribes Spiraea Viburnum Vitex Diervilla	Mock-orange Flowering plum Sumach Flowering currant Bridal Wreath Snowball Chaste Tree Weigela	6'-10' 8'-10' 15' 4'-6' 12' 8'-12' 5'-6' 6'-8'	White Deep pink White Yellow White White Lilac Red, white, pink	June May July-Aug. April-May May-June May-June Aug.-Sept. June-July	Profuse bloomers; a valued and favorite shrub. Flowers of a beautiful shade. Suited for damp places; brilliant in the fall. Fragrant; nice foliage; grows well even in moist spots. A shrub of exceptional gracefulness. There are many varieties; each has some good point. Gracelul; long spikes; flowers late in summer. Of robust habit, blooms profusely, and easy growth.
For Individual Specimens					
Althea Acer Japonica Aralia spinosa Baccharis Cercis Chionanthus Cornus Rhus Cotinus	Rose of Sharon Japanese maple Angelic tree Groundsell tree Judas tree White fringe tree Dogwood Smoke tree	8'-12' 6'-10' 10'-15' 10'-12' 10'-12' 8'-12' 15'-20' 12'	Rose, white Foliage, various White Rosy pink White White, red Smoke colored	Aug.-Oct. Aug. April-May June May July	Among the best of tall shrubs; very hardy. Leaves of many distinct shapes and attractive coloring, especially in early spring. Unique tropical looking. White fluffy seed pods in fall. Flowers before leaves appear; very attractive. Very distinctive and attractive in appearance; flowers resemble fringed decoration. Not symmetrical in shape but very striking; foliage highly colored in autumn. Very distinctive; flowers in feathery clusters.
For Hedges and Screens					
Althea Berberis Crataegus Hydrangea paniculata Privet Pyrus Spiraea Syringa	Rose of Sharon Japanese barberry Hawthorne Hydrangea paniculata Privet Japan quince Spiraea Lilac	8'-12' 3'-4' 12'-15' 6'-10' To 8' 6'-8' 6'-8' 15'-20'	Rose, white White, red White to rose Bright scarlet White White, pink, lilac	Aug.-Oct. May-June Aug.-Sept. Early May May-June May-June	See above; plant close, 15" to 18". Absolutely hardy; foliage light green, brilliant in autumn with scarlet berries. Very attractive; many different forms; long lived. Colored fruits. Color changes; very hardy; one of the best late flowering shrubs; enormous flower panicles. Most popular formal hedge plant; plant close, 8" to 10"; prune to shape frequently. New varieties harder than California. Set 15" apart; makes a dense hedge; requires a little pruning. Plant 1½' to 2' apart; very graceful in formal hedge; especially for boundary lines. Plant 2' to 3'; very fragrant; good for along walls, etc. Japonica latest blooming.

SUMMER FLOWERING BULBS

FLOWER	HEIGHT	COLOR	SEASON OF BLOOM	DIRECTIONS
Anemone	12"-18"	White, crimson, pink, blue	July-Sept.	Plant in May in sheltered position, in groups, about 6" x 6". Hardy. Start in heat, or plant in rich, light soil in open. Water freely. Plant suitable varieties in rich warm soil. Plenty of water; store for winter in warm temperature.
Begonia	12"-18"	Pink, yellow, red	June-Sept.	
Calla	18"-24"	Yellow, white	June-Sept.	
Canna	2'-6'	Pink, yellow, red, white	June-Oct.	Start in heat, or plant dormant roots in rich soil. Store for winter. Sheltered, semi-shaded position, light rich soil. Store in warm place. Start in heat or outdoors after danger of frost, in deep, rich soil; thin and disbud for good blooms.
Caladium	18"-5'	(Foliage) green or variegated	June-Oct.	
Dahlia	2'-6'	White, pink, yellow, red, variegated	June-Oct.	
Gladiolus	2'-5'	Pink, red, white, yellow	July to frost	Succession of plantings from April to June for continuous bloom; store cool for winter. Single and double forms; easily grown; good for cuttings. Culture similar to that of gladiolus. Plant 3" to 6" each way; take up or protect. Culture same as above but should be stored for winter. Plant out in May, or start in heat. June and July planting for late flowers. Good for masses or borders; plant two clumps, in early spring. Store like gladioli.
Ranunculus	2'	White, yellow, scarlet	May-June	
Montbretia	2'-4'	Red, yellow, scarlet	June-Oct.	
Tigridia	18"	Blue, pink, yellow, scarlet	June-Oct.	
Tuberose	2'-3'	White	July-Sept.	
Zephyranthus	8"-10"	White, pink	June-Sept.	

FLOWERS FOR EVERY PLACE

FLOWER	HEIGHT	COLOR	SEASON OF BLOOM	DIRECTIONS
For Beds and Masses				
Asters (A) Alyssum (T) Begonias (T) Cosmos (A) Clematis (A) Cocksfoot (A) Heliotrope (P) Marigold (A) Nasturtium (A) Pansies (A) Petunia (A) Phlox Drummondii (A) Salvia (A) Verbena (A)	18"-30" 2'-8" 2'-8" 18"-4" 12"-24" 10"-36" 12"-24" 6" 12"-24" 12"-36" 12"-36" 6'-9"	Various White, pink, red White, pink, red Red, yellow Blue and white Pale gold to orange Various White to claret mixed Various, brilliant Scarlet Various	July-Sept. May-Sept. June-August August to frost June-Sept. May-Sept. July to frost July to frost July to frost July to frost August to frost July to frost	Protect from aster beetle by hand picking and Paris green. Very free and continuous flowering; bushy, compact growth; good for edging. (P) Very graceful and aristocratic; good for backgrounds or massing against buildings, fences, evergreens, etc. (P) Colors rather crude but brilliant; good effect at a distance. Flowers freely until frost; give good soil; fragrant. (P) Easily grown, free flowering; select color with care, avoiding mixtures. Especially good for new or poor soil; for best flowers soil must be not too rich. For immediate show get old plants; but for a long season new plants just beginning to bloom. (P) Use named varieties, or keep in seed-bed until first blossom opens before transplanting. (S B) Unsurpassed, brilliant and harmonizing colors; many fine named varieties. (S B) Unqualified for brilliant massed effect, select variety for height wanted, pinch back for stocky plants. (P) Most brilliant for low, spreading, carpet growth; flowers to hard frost. (P or S B)
For Edges and Borders				
Ageratum (A) Alyssum (T) Bellis perennis (H) Marigold (Dwl. Str.) (A) Myosotis (B) Zinnia (Dwl. Str.) (A)	12" 6'-12" 6'-12" 9'-12" 9'-12" 12'-18"	Blue, white White, lilac White, pink, red Orange and yellow Blue, white Crimson, yellow and white	June to frost May to frost April-July April-July June to frost	Compact, upright growth; will not spread out over walk. (P or S) Trailing or spreading; very graceful in habit. (P or S) Neat, compact, cheery; wonderful number of little daisy-like flowers. (P) Dwarf sorts in named varieties very effective for narrow borders. (P or S B) Best blue edging plants, especially dainty. (P) Neat, upright, formal effect, dwarf varieties, selected colors
For Shady Places				
Antirrhinum (P) Aquilegia (P) Cantabury Bells (B) Delphinium (H) Digitalis (B) Myosotis (B) Pansy (A) Poppy (P) Schizanthus (A) Torenia (A)	24" 18"-36" 18"-30" 3'-4" 12"-36" 6'-12" 6" 12"-18" 24" 8'-15"	White, red, yellow White, orange, blue Pink, blue, white Blues White, pink, purple Blue, white Various White, yellow, orange Mixed—yellow to lilac Blue, white	July-Sept. June-July June-August July-Sept. June April-July May to frost May-Sept. July-August July-Sept.	Select dwarf, medium or tall varieties as wanted; stake tall sorts loosely. Graceful, open habit of growth; fine in combination with other things. Winter over plants or started early in heat; avoid crowding. (P) Germinate in garden for bloom; started in heat will bloom first season. (P) Easily grown old favorites; wintered over plants or started early in heat. (P) See above; good for moist situations; some fine new varieties. (P) Succeeds in partial shade, but blooms more freely in sunshine. Long season of bloom; one of the most satisfactory of all; start early. (S) Exceptionally gay, free flowering dwarf sorts for borders. (S) Trailing, especially fine for porch hanging baskets, etc.
For Cutting				
Acrotonis (A) Asters (A) Calliopsis (A) Chrysanthemum (A) Cosmos (A) Dianthus (A) Gypsophila (A) Poppy (P) Salpiglossis (A) Scabiosa (A) Sundaster (A) Shasta Daisies	12" 15" 18" 12"-30" 12"-30" 2'-8" 10"-18" 12"-18" 12"-21" 15"-30" 3'-7" 15"-18"	Rich, various Various Yellow (orange brown) White, pink, red White to rose White, yellow, orange Crimson, rose, purple, white White, black-purple, blue, rose Yellow White	June to frost July-Sept. June-Sept. August-October August to frost August to frost June-Sept. May-Sept. July to frost August-Sept. August to frost	Easily grown, give sunny situation; start in heat or outdoors. (P or S) Protect from beetles; disbud for finest flowers. (S or P) Give plenty of sun; keep dead flowers cut off. (S) Very showy; pinch back to get bushy plants. (P or S B) See above; start in heat for early cutting. (P or S) Exceptionally easy growth; brilliant, rich colors; avoid crowding. (S) Unexcelled for use with other cut flowers; small sowing every month. (S) For opening buds; keep old flowers cleaned off; avoid crowded plants. (S) For stronger flowering plants start early; use selected colors. (P or S) Old favorite but one of the most satisfactory; try improved named varieties; avoid crowding; cut flowers. Great variety; continuous supply; sunny position; keep cut. One of the longest keeping, especially good; wintered over plants, or start early; seeds.
For Fragrance (Cutting)				
Centaura (Sweet Sultan) (A) Heliotrope (P) Mandarin (A) Mignonette (A) Stevia (A) Stocks (A) Suecia (A) Wallflower (B)	24"-30" 12"-24" 15" 12"-18" 24" 2'-6" 2'-6" 12"-30"	Rose, lavender Purple, white Blue, white White, yellow, pink, red Pale gold to orange Lavender, pink, yellow, scarlet White, rose, pink, crimson, mauve Brown (yellow)	June-Sept. May-Sept. May-Sept. July to frost July to frost June-Sept. June-Sept. July-Sept.	Make second sowing; favorite old "Sweet Sultan." See above; select most fragrant plants for stock. (P) Bloom early from seed; give good stand; selected colors. (S B) Sow every month or so for succession; cool, moist soil. (S or S B) Free blooming, one of the purest whites. (S or S B) Give rich soil; start indoors or in seed bed, and transplant twice to select double flowers only. (P or S B) Plant deep, avoid overcrowding; water abundantly; keep old flowers picked. (P and S) Winter over or start early in heat to get flowers first season. (P)
For Climbing				
Canarybird Vine (A) Cardinal Climber (A) Dolichos (Horn Bean) (TA) Morning Glory (TA) Nasturtium (A)	10' 20' 10' 15'-30' 15'	Canary yellow Scarlet, white White, blue Mixed Crimson, maroon, orange, white, rose	June to frost July to frost Mid-July to frost August to frost June to frost	Fringed, bright yellow flowers, very unique; rapid grower. (P or S) New rapid grower; unparalleled for brilliant display; stock or file seeds. (P or S) Easily grown; very free flowering; good for screening. (S) Uniform and fragrant; some new named varieties; start early for best results. (P or S) Old favorite but greatly improved; for covering fences, rubbish heaps, etc., as well as climbing. See above. Use self-colors for most striking effects

NOTES: "A" annual; "B" biennial; "P" perennial; "H" herbaceous; "T" tender; "TA" tender annual; "S" seedling; "S B" seedling biennial; "Dwl." dwarf; "Str." standard; "H" half-hardy; "P" plants from frames, greenhouses, or florists. In the Directions: S—sow seed in the open, where plants will bloom. S B—sow plants in seed bed or border, to transplant to permanent positions. P—plants from frames, greenhouses, or florists.

VEGETABLES FOR A CONTINUOUS SUPPLY

VEGETABLE AND TYPE	REPRESENTATIVE VARIETY	FIRST PLANTING	SUCCESSIVE PLANTINGS Weeks Apart	AMOUNT OR NUMBER FOR 50' ROW	DIRECTIONS
Bean, bush, Green Pod	Early Bountiful	April 15	2-3; to Aug. 15	1 pt.	In dryest soil available; cover first planting 1" deep.
Bean, bush, Wax	Burpee Improved	May 1	2-3; to Aug. 15	1 pt.	In dryest soil available; cover first planting 1" deep.
Bean, bush, Lima	Golden Cluster	April 25	June 15	14 pt.	Plant one eye down, when there is prospect of several days' dry weather.
Bean, pole	Early Leviathan	May 1	June 15	14 pt.	Place down before planting in rich hills; thin to best plants.
Beets, Ex. Early	Early Model	April 1	June 15	14 pt.	First planting in slightly raised hills; thin to best two plants.
Beets, main and winter	Detroit Dark Red	May 1	3-4; to Aug. 15	1 oz.	First planting shallow, about 1/2" deep and extra thick.
Brussels Sprouts	Dalkeith P	June 15	3-4; to July 15	35	In dry weather, soak seeds; firm well; for winter use sow about three months before harvesting.
Cabbage, Ex. Early	Southern Home	April 1	June 1	30	Transplant at four to six weeks; same treatment as late cabbage; pinch out tops of stalks when "button" are formed.
Cabbage, summer	Succession	May 1	June 15	30	Set out well hardened off plants as soon as ground can be worked; fertilize in rows.
Cabbages, late	Arish Ball Head	June 1	July 15	30	Light applications of nitrate of soda beneficial; to keep mature heads from splitting, pull enough to loosen roots in soil.
Carrots, Ex. Early	Early Scarlet Horn	May 15	3-4; to Aug. 15	15 oz.	First planting from seed sown June 1st; use water in bottoms of holes if soil is dry; firm well.
Cauliflower, spring and fall	Early Snowball	June 1	July 15	30	Transplant extra thick only 1/2" to 3/4" deep; thin early.
Celery, Early	Golden Self-Blanching	May 10	4; to July 10	35	Select rich, deep soil to get smooth roots; for storing plant about 90 days before harvesting time.
Celery, late	Winter Boreen	June 1	July 15	100	Enrich rows; protect from curvatures; plenty of water when heading.
Corn, Early	Golden Bantam	May 1	June 1	12 pt.	Sow seeds six to eight weeks before transplanting; hill up; store in cellar for winter.
Corn, main crop	Golden Gentleman	May 1	June 15	12 pt.	First planting in dry soil; cover only 1" deep; give protected sunny exposure if possible.
Cucumbers, for slicing, etc.	Ever-bearing	June 1	July 15	12 pt.	Enrich hills; thin to 3 or 4 plants; protect from striped beetle.
Cucumbers, for pickling	Black Beauty	May 20	July 1	25	Gather fruits while quite small; keep them all picked for continuous bearing.
Egg-plant	King of the Market	June 1	July 15	12 pt.	Enrich hills; give plenty of water; protect from potato bugs.
Fennel	White Vienna	April 10	4; to Aug. 1	15 oz.	Culture same as for lettuce save that leaves should be tied up to blanch for use.
Kohlrabi	American Flag	April 15	4; to June 15	15 oz.	Treatment similar to turnips; thin out as soon as possible; begin to use while small; 1" or so in diameter.
Leek	Grand Rapids	April 10	3; to May 20	50	Transplant at size of lead pencil to deep, well enriched trenches; hill up to bleach.
Lettuce, loose leaf for spring and fall	Big Boston	April 10	3; to May 20	50	Sow seed when plants are set out, and for succession plantings, thinning out early.
Lettuce, "Crisp Head," for summer	Brittle Ice	May 15	June 15	14 oz.	Thin out early, for fall plant again July 15 to August 15.
Melons, musk	Nerted Gem	May 1	June 15	14 oz.	Give plenty of water; top-dress with nitrate of soda; thin out as soon as possible.
Melons, water	Halbert Honey	May 15	June 15	14 oz.	Enrich hills with old compost and wood ashes; add sand in heavy soil; protect from striped beetle.
Onions, "sers"	White Velvet	April 1	June 15	12 pt.	Same as for musk melons; pinch out tips of runners at 5' or 6'.
Onions, globe	Yellow Danvers	April 1	June 15	12 pt.	Give warm, rich soil; nitrate of soda during early growth; treat like corn; use pods while young.
Onion, large Spanish	Emerald Curled	April 15	June 15	12 pt.	Mark out drill; insert up to neck.
Peas, smooth	Alaska	April 1	June 15	12 pt.	Keep clean; top-dress with nitrate of soda; do not thin until well along.
Peas, Early, wrinkled	Gradus (Little Marvel Dwarf)	April 10	3; to May 20	1 pt.	Start seedlings and transplant to rich soil; give plenty of water.
Peppers, large fruited	Alderman (British Wonder Dwarf)	April 15	3; to June 15	1 pt.	Soak seed twenty-four hours; cover very lightly; thin out early.
Peppers, small fruited	Ruby King	May 15	June 15	30 x 2	Cover first planting about 1" deep; sow only a small quantity as wrinkled variety is better flavored.
Parsnips	Improved Hollow Crown	April 10	3; to June 15	40	Dwarf varieties 2 1/2" x 2 1/2"; make first plantings in light soil, or on slightly raised drill 1/2" to 1" deep.
Potatoes	Quaker Pie	April 10	3; to June 15	24 x 15	Make later plantings in trench, filling in gradually as vines grow; plant early varieties July 20 to August 10 for fall crop.
Pumpkin	Irish Cobbler	May 15	June 15	24 x 15	Same as for egg-plant; use good strong potted plants for both to get best results.
Radish, Early	Crimson Giant Globe	April 1	June 15	18 x 8	Top-dress with nitrate of soda during early growth.
Radish, summer	Chartiers	May 1	June 15	18 x 8	Select deep, loose soil or trench before planting to get good smooth roots.
Radish, winter	White Chinese	June 15	July 15	12 x 3	For earliest results sprout four weeks in sunlight before planting.
Rutabaga	Golden Necklace	May 1	4; to July 1	12 oz.	Plant in rich hills; if space is limited, put near edge of garden, or train where vines can run along fence.
Salsify	Sandwich Island	April 10	4; to Sept. 1	12 oz.	Make frequent small sowings; work lime plaster, soot or wood ashes into row, take up and destroy roots not used.
Squash, summer	Victoria	April 1	June 15	12 x 3	Thin out early; plant in finely prepared soil to get good, smooth roots.
Squash, winter	Golden Summer Crookneck	May 1	June 15	12 x 3	Roots for storing in winter should not be planted until quite late, as they are better both in keeping and eating qualities not overgrown.
Swiss chard	Hubbard	May 15	June 15	12 x 3	Excellent for storing for winter: culture similar to turnip; late planting makes best quality roots.
Tomato, Early	Lucullus	April 10	4; to July 1	12 x 3	Be careful to get seed thick enough; sow in deep, fine soil to get smooth roots.
Tomato, main crop	Bonnie Best (Chalk's Jewel)	May 1	4; to Sept. 1	12 x 3	Sow in rich soil; thin first to 2" apart; second thinning may be used for table; apply nitrate of soda.
Turnip, summer	Stone	May 15	June 15	12 x 3	For bush 4' x 3'; enrich hills; thin to two or three plants; protect from bugs.
Turnip, winter	Amber Globe	April 10	4; to Sept. 1	12 x 3	Thin to two plants when vines begin to crowd; watch for borers; protect from squash bugs.
	White Globe	June 1	Aug. 1	12 x 3	Sow about half as thick as beets; thin out as soon as well started; cut leaves in gathering 3" or so above crown.



NOTES ON VEGETABLES

"up"—plants from frames or seed-beds.

First figure under Directions indicates distance between rows; second between plants in row after thinning, or between hills.

Drills are continuous rows, in which the seeds are sown near together, and the plants even after thinning stand at irregular distances, usually touching.

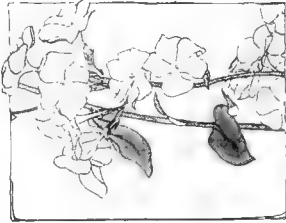
Rows have the plants at regular distances, but so near together that machine cultivation is attempted only between the rows.

Hills, which are usually especially enriched before planting, are isolated groups or clusters of plants, generally about equidistant—3' or more—each way.

Thinning consists in pulling out the surplus seedlings as soon as most of the seeds are up.

Hilling is drawing the soil up toward the roots or stems; often *acordon*—usually a wide, slight hill is the best.

Blanching is necessary to prepare some plants such as celery and endive, for eating: excluding the light, banking with earth, tying up the leaves, covering with prepared paper, and storing accomplish this result.



SPRAYING EQUIPMENT for the WAR on INSECT P E S T S



In communities where fruit trees are plentiful it is often feasible for a number of owners to unite in purchasing a large power sprayer whose original cost, maintenance and services can be shared by all. Courtesy of Baleman Mfg. Co.



(Right) A knapsack sprayer in use. Its weight is supported by a broad shoulder strap, leaving the hands free to operate the nozzle. Only occasional pumping is needed to maintain the air pressure.



A pump sprayer to be attached to a barrel containing the insecticide. A simple agitating device keeps the liquid well mixed. Courtesy D. B. Smith & Co.



The pump sprayer above is designed to be used with a pail of liquid. The two tubes go inside the pail and an outside foot-piece holds them in place while operating. Courtesy D. B. Smith & Co.

(Above) The compressed air knapsack sprayer, which is pumped up by means of the central handle, is the best type of small apparatus. Several good makes are on the market.



A man-power device used for orchard work where considerable spraying is to be done. It can be mounted on an ordinary farm wagon. Courtesy Baleman Mfg. Co.

THE PESTS AS THEY APPEAR

INSECT OR DISEASE	IDENTIFICATION	WHEN TO LOOK FOR	ATTACKS	CONTROL
IN THE VEGETABLE GARDEN				
Cut-worms	Sluggish, fat, brown soil worm, $\frac{3}{4}$ " to 2" long with stripe along side; works at night.	Through season, mostly April to June, cutting off young plants and seedlings. Dig around cut-off plant.	Especially cabbage, cauliflower and tomato plants.	Poison bait <i>before</i> planting, and give plants protection with 4" paper bands 1" in soil; also hand picking.
Aphis or "plant louse"	Small, green or black, soft bodied flies about $\frac{1}{16}$ " long, congregating in large numbers.	Throughout season, especially on half-grown plants and in dry weather on under side of leaves.	Cabbage, cauliflower, lettuce, peas, etc.	Contact spray, two or three applications, at intervals of a week or ten days, especially against under side of foliage, and on folding leaves.
Potato beetle	Common striped beetle or bug $\frac{1}{2}$ " long.	Through season, first on earliest sprouting potatoes; three broods.	Potatoes, egg-plants, tomatoes.	Spray or dust with arsenate of lead or Paris green; hand picked from egg-plant.
Flea beetle	Minute, black, active jumping beetle.	Mostly in May and June on seedlings; leaves punctured.	Potatoes, tomato, cabbage group, turnips.	Bordeaux mixture and arsenate of lead; tobacco dust on seedlings.
White grub	Large, soft, white, repulsive grub or worm, feeding on roots under ground; $\frac{1}{2}$ " to $1\frac{1}{4}$ " long.	Through season; especially numerous in newly plowed sod ground and moist places.	Strawberries especially; also corn, potatoes, etc.	Plowing late in fall; summer following; trapping adults (May beetles); destroying grubs and re-setting affected plants.
Root maggot	Small white worm or grub $\frac{1}{4}$ " to $\frac{1}{2}$ " long.	Through season; first indication wilting of plants without apparent cause.	Onions, cabbage, cauliflower, turnips, etc.	Protect cabbage group with tarred paper guards; poison paper for adult flies before laying eggs; burn infested plants.
Corn borer	White, smooth borer, 1" to $1\frac{1}{4}$ " long. Second brood in early fall.	Moths appear in May, caterpillars soon after.	Corn, chard, beets, etc. Lives over on burdock, etc.	Keep garden surroundings clean; burn old stalks, weeds, etc., in fall.
Cucumber beetle	Small, very active, black and yellow striped beetle, $\frac{1}{2}$ " or so long.	Through season, especially as vines begin to run, and in dry weather.	Cucumbers, melons and vine crops.	Arsenate of lead with Bordeaux mixture. Screen young plants and sprinkle with tobacco dust.
Squash bug ("stink" bug)	Dull black, flat, very active beetle with long legs, often moving backwards or sideways when disturbed; $\frac{1}{4}$ " to $\frac{3}{4}$ " long.	Usually appears first late in June, remaining until cold weather. Young hatched from brown eggs on under side of leaves; resemble large aphids.	Squash, pumpkins and other vine crops.	Trap old bug under shingles and destroy; spray young with nicotine or kerosene emulsion; screen young plants.
White fly	Minute, tenacious, white winged fly, congregating in large numbers until disturbed.	Through warm season, especially under dry or overcrowded conditions; prevalent in frames or greenhouses.	Tomato, cucumber, etc.	Spray with nicotine or kerosene emulsion for young, which resemble lice on under sides of leaves; tobacco dust as a repellent.
Thrip	Very minute, cause yellowish appearance or twisted leaves.	Throughout season, especially on neglected or backward plants.	Onions and leeks.	Thorough, forceful spraying with kerosene emulsion or with nicotine.
Asparagus beetle	Active, yellow spotted beetle, $\frac{1}{2}$ " long.	June-Aug., especially on new growth.	Asparagus foliage.	Arsenate of lead; cut and burn stalks in fall.
Melon louse	Small green aphid. See Aphis.	Throughout season, usually first in May or June; leaves curl up abnormally.	Melons, cucumbers and other cucurbits; strawberries.	Carefully remove, bury or burn infested parts of plants; spray as for aphids.
Onion thrip	Minute, active, whitish insect barely visible to the naked eye, lodging especially down between leaves.	Through season, especially June to August; onion tops twisted and curled, prematurely yellow.	Onions and leeks.	Nicotine spray forcibly applied; kerosene emulsion.
Tomato worm	Large, green horned worm, often several inches long.	From mid-summer to early fall; strips foliage clean, conspicuous inroads.	Tomato and tobacco mostly.	Arsenate of lead; hand picking into can or pail, and late fall plowing.
Rust	"Rusting" or yellowing of foliage or stalks.	Through season, especially late June to August.	Various vegetables, especially celery, beans, asparagus.	Avoid working when foliage is wet; successive spraying with Bordeaux. On maturing celery use ammoniacal solution of copper carbonate.
Mildew	Whitish coating or spotting of the foliage, spreading rapidly.	Favoring conditions same as for blight; also crowded foliage.	Cucumbers, melons, lima beans, etc.	Spray with Bordeaux every week or ten days.
Blight	Usually a yellowing or spotting of the leaves, progressing very rapidly.	Throughout season, especially in muggy weather and low, closed places.	Potatoes, beans, celery, cucumber, etc.	Spray with Bordeaux at or before first signs and repeat frequently to keep all growth covered.
Leaf spot or rot	Spots in leaves, stems, or fruit turning brown or black.	Throughout season, especially in warm weather after rainy spells.	Tomatoes, beans and many others.	Bordeaux mixture, removing surplus foliage, and in the case of fruits that touch.
IN THE FRUIT GARDEN				
Scale, San José	Minute, yellowish, sucking insects covered with small shell or scale, the size of a pin-head; presence indicated by gray scurvy appearance of bark, and minute red rimmed spots on fruit.	Throughout season; multiplies with extraordinary rapidity.	Apple and other fruit trees.	Dormant sprays in early spring or fall, using lime sulphur, miscible oil or kerosene emulsion.
Scale, oyster shell	Dark brown scale like elongated oyster shell about $\frac{1}{8}$ " in length, the young resembling active whitish lice.	Throughout season, young hatching in May or early June.	Apple and other fruit trees.	Same as for San José; also nicotine or kerosene emulsion as soon as young hatch.
Apple aphid	Bright green aphid.	Throughout season, especially on the sides of new leaves.	Apples, peaches, plums.	Dormant spray before leaves come out; nicotine spray on young foliage.
Scab, apple	Causes dark colored spots on leaves or fruit.	Throughout season, spreads most during spring.	Apple and pear.	Spray with lime sulphur before blossoms open, after blossoms fall, and two weeks later; burn leaves and twigs in fall.
Caterpillar, tent	Striped caterpillars in large masses in webs or "tents."	Early in spring; "tents" at first inconspicuous, gradually enlarged.	Apple, cherry, and other trees.	Destroy egg masses in winter; wipe out tents as soon as visible with kerosene smudge in spring.
Bud moth	Light brown caterpillar, head and legs dark.	Early in spring before buds open.	Especially apple buds.	Arsenate of lead spray for matured worms.
Currant worm	Green worm with black spots about 1" long.	Before blossoms open, usually first on lower leaves.	Currant and gooseberry.	Spray with arsenate of lead until fruit forms; after that, hellebore.
Coddling moth	The "mother" of wormy apples; moth is small and chocolate colored; worm hatches on the outside, usually in blossom end, and eats in; about $1\frac{1}{2}$ " long.	In spring and early summer.	Apple.	Spray with arsenate of lead just before petals fall, before calix closes; ten days later and again in about four weeks; band trunks during July.
Canker worm	A "measuring worm," 1" or more in length.	May and June.	Apple.	Arsenate of lead, when worms appear; band trunks in March or early April.
Blister mite	Small mite causing leaf blisters turning from light green to red and brown.	Throughout season.	Pear and apple.	Strong miscible oil or kerosene emulsion spray; just before leaves come out and again in fall.
Curculio	Small, grayish beetle, $\frac{3}{8}$ " to about $\frac{1}{4}$ " long. Back mottled black and white; has a conspicuous "snout."	In early summer when fruits are beginning to form; another generation in August.	Injures young fruits by puncturing them to eat and lay eggs; apples, peach, plum.	Spray with lime sulphur and strong arsenate of lead; for best results jar trees every cool morning, and catch beetles on sheet spread beneath.
Leaf hopper	Small, slim, yellowish hoppers with blunt heads.	Through season, indicated by leaves turning brown and drying up; "hoppers" working on the under side.	Apple and grapes.	Spray under side of leaves with strong kerosene emulsion.
Rot, black	Fruits turn purplish brown and become shriveled.	Summer; especially after wet weather and where tall weeds or grass are left near the vines.	Grapes.	Spray with Bordeaux till mid-July; then ammoniacal solution copper carbonate; for few vines bunches may be covered with paper bags; dormant spray with lime sulphur or miscible oil; gather fallen fruit and burn.
IN THE FLOWER GARDEN				
Aphis (plant louse)	Similar to those attacking vegetables described above.	See aphid above. Where foliage is thick, in axils of leaves or growing tips.	Roses, sweet peas and most soft-wooded plants.	Nicotine spray; kerosene emulsion.
Mealy bug	Small, soft-bodied insect covered with small cotton-like specks.	Congregate in leaf axils throughout season; most likely on neglected plants in frames or on porches.	Soft-wooded plants and new growth on some hard-wooded plants such as fuchsias.	Nicotine spray or paint with strong kerosene emulsion, alcohol.
Rose beetle	Yellowish, active, crawling beetle $\frac{1}{2}$ " or more long with long hooked legs.	Throughout season, especially May to July, when plants are in bloom.	Roses mostly.	Arsenate of lead or Paris green extra strong; hand picking into kerosene and water most effective.
Leaf spot; rust	See above.	Throughout season.	Asters, carnations, etc.	Spray with Bordeaux. Keep new growth covered.
Mildew	Powdery, dirty white deposit on leaves.	Through season, especially after sudden changes in temperature.	Roses and some others.	Prune infected parts; dust with flowers of sulphur; thin sufficiently for free circulation of air.
Aster beetle	Active, long-legged beetle, $\frac{1}{2}$ " to $\frac{3}{4}$ " in length, eating flowers and foliage.	Appears in numbers, August and September.	Asters preferably, and some other flowers.	Strong arsenate of lead spray; knock bugs in early morning into can of kerosene and water.

FALL PLANTING TABLE

The questions of what, where and how to fall plant puzzle many home gardeners. Here they are answered briefly and without unessential verbiage. Let the following table be the basis of your flower and shrub planting this fall

HARDY PERENNIALS

NAME	BLOOMS	HEIGHT	COLORS	REMARKS
Aquilegia	May-June	3-4	Yellow, red	Aquilegia. Graceful and airy, especially valuable in mixed border.
Aconitum	June-Sept.	3-5	Blue	Aconitum. One of the best for shady and semi-shady positions.
Anchusa	May-June	3-5	Blues	Anchusa. The new varieties are great improvements. Give full sun.
Anemones	Sept.-Oct.	1-2	White, rose	Anemones. Beautiful flowers, lasting until hard frost. Good for cutting.
Carex (Sedge)	May-June	1-2 1/2	Foliage	Carex (Sedge). Good for marshy places or wet spots.
Chrysanthemums	Sept.-Nov.	2-4	White, maroon, yellow	Chrysanthemums. Most important of the late fall flowers.
Dicentra	May-June	2-3	Pink	Dicentra. Old favorite, thriving in either shade or sun.
Dictamnus	May-July	2-3	Pink, white	Dictamnus. Showy for the mixed border; give rich soil and sun.
Delphinium	June-Sept.	3-6	Blue	Delphinium. Indispensable for background in the mixed border.
Ferns	May-Oct.	1-4	Foliage	Ferns. Good for shady positions, especially massed around the house.
Foxgloves	June-July	4-5	White, purple, blue	Foxglove. For backgrounds in the mixed border. Dominate whole garden.
Hardy grasses	May-Oct.	2-5	Foliage	Hardy grasses. Should be used freely both by themselves and in mixed border.
Hardy pinks	May-June	1	Crimson, white	Hardy pinks. Old favorite. Among the easiest to grow of border plants.
Hibiscus	July-Aug.	5-8	Pink, white	Hibiscus. Full sun, but prefer moist soil. Robust growth with immense flowers.
Helianthus	July-Sept.	5-6	Orange, yellow	Helianthus. Desirable for shrubby planting and in clumps. Newer varieties.
Iris	May-July	2-3	Blue, lavender, yellow	Iris. Select varieties for succession of bloom and character of soil.
Peonies	June	2-4	Red, white	Peonies. Strong soil and sun or partial shade. Cover crown 2" deep.
Perennial poppies	June-Sept.	1-3 1/2	Red, white	Perennial poppies. "Iceland" bloom all season; "Oriental" in May and June.
Primroses	April-May	1 1/2-1	White, yellow	Primroses. Good for half shady position and rockeries. Rich soil.
Phlox	June-Aug.	2-3	Pink, red, white	Phlox. Select for succession of bloom; replant every three or four years.
Rudbeckia	July-Aug.	4-6	Yellow, orange	Rudbeckia. Hardy, robust; spreads by itself; excellent for screening.
Saxifraga	April-June	1 1/2-3	Pink, white	Saxifraga. Very hardy; thrives everywhere; good for bordering shrubbery.
Shasta daisy	July-Sept.	1 1/2	White	Shasta daisy. The popular original has been improved in later varieties.
Spiraea	May-June	3-5	White, pink	Spiraea. Prefers semi-shade and moist soil; good for borders; permanent.
Stokesia	July-Aug.	1 1/2-2	Blue, white	Stokesia. Good for masses and beds in sunny positions; very hardy.
Sweet William	June-Sept.	1 1/2	Pink, white	Sweet William. Extremely hardy and permanent; fine for cutting.
Salvia	June-Oct.	3-6	Blue, red	Salvia. Prefer moist and semi-shaded positions; several new varieties.
Trillium	May-June	1 1/2	Red, white	Trillium. Good for moist, shady positions in the hardy border.
Veronica	June-Aug.	1 1/2-4	Blue, white	Veronica. Long spikes of flowers; extremely effective in mixed border.
Vinca	April-Nov.	1 1/2-1	Foliage	Vinca. Good as ground cover in shady position and under shrubs.
Violets	April-May	1 1/2-1	Blue, white	Violets. A generous number should be included in every mixed border.

SHRUBS

Berberis	April-Nov.	2-3	Foliage	Berberis. Best general plant for informal hedges; color in autumn.
Deutzia	May-July	6-8	Pink, white	Deutzia. Very hardy, permanent, and free-flowering; any soil; full sun.
Lilac (Syringa)	May-June	15-20	White, lilac	Lilac. Tall hedges, screens, and individual specimens.
Hydrangea	June-Sept.	10-15	White, pink	Hydrangea. Lawn specimens, hedge terminals, screening hedges.
Forsythia	April-May	8-10	Yellow	Forsythia. Single specimens and in mixed border. Best early shrub.
Japanese maples	May-Oct.	10-15	Colored foliage	Japanese maples. Invaluable alone on the large or small lawn.
Rhus	July	15-20	Foliage	Rhus. Unique and effective. Good background shrub.
Spiraea	May-June	15	White, pink	Spiraea. Invaluable in the mixed border; also isolated. Many varieties.
Althea	Aug.-Oct.	15-20	White, red	Althea. Tall hedges and single specimens. Very hardy.
Viburnum	May-June	12-15	White	Viburnum. Hardy and effective. Flowers followed by white or scarlet berries.
Weigela	June-Aug.	8-12	Pink, white	Weigela. Extremely pretty and free-flowering. Graceful single specimens.

BULBS

	Plant-Inches Apart	Deep		
Tulips	4-8	4-6	1-3	Pink, purple, white
Narcissus	6-12	5-7	1-2	White, yellow
Jonquils	6-8	4-6	1-1 1/2	Yellow
Hyacinths	6-10	5-7	1-1 1/2	Blue, white, pink
Lilies	12-24	6-10	2-6	White, red, yellow
Snowdrops	2-4	3-4	1 1/2	White
Scillas	2-4	2-4	1 1/2	Blue, white
Crocus	2-4	3-4	1 1/2	Blue, white, yellow
Spanish Iris	6-12	3-4	1-2	Blue, purple
Grape Hyacinth	2-3	3	1 1/2	Blue, white
Anemones	4-6	3	1 1/2	Blue, white, scarlet
Allium	6	2-4	1	Yellow, blue
Chionodoxa	3-6	2-4	1 1/2	Blue

Tulips	Most effective in long borders and in front of shrubs.
Narcissus	N. poeticus and N. P. ornatus good for naturalizing.
Jonquils	For the mixed border and for cutting. Plant early.
Hyacinths	Best for formal and design bedding. Mass in variety.
Lilies	Plant soon as received. Succession of bloom throughout summer.
Snowdrops	Earliest flowering; naturalize in open woods or in rockery.
Scillas	Under trees or on shady lawn; will stand close mowing.
Crocus	Brightest of the early spring blooming bulbs. Naturalize.
Spanish Iris	Prefer a light, friable soil; good for the mixed border.
Grape Hyacinth	"Heavenly Blue" the best variety; plant in groups.
Anemones	Prefer well-drained, sheltered position; good for rockery.
Allium	Naturalize where grass does not have to be cut and in borders.
Chionodoxa	Prettiest of the early blue spring flowers; naturalize in grass.

FALL PLANTING INSTRUCTIONS

For the details of fall planting, turn to various other pages in this book. Be sure that the plants are in a healthy condition. Plants set out in the fall in a dormant or semi-dormant state do not give evidence of infestation. Buy from a reliable nurseryman. Plants should be well matured; the wood should be firm and hard in the case of trees, shrubs and small fruits, and the season's period of flowering over in the case of perennials. Set out immediately upon arrival.

Any ordinary good soil will answer for most plants. Avoid extremes of sand or clay. Thorough drainage is essential. Heavy soils will be benefited by an addition of coarse sand, gravel, coal ash, or broken brick. Lime is good for both extremely heavy and light soils; it should be used with discretion.

The amount of soil preparation will depend on the quality of the soil and the culture it has received a year or two pre-

vious. Add rotted manure and ground bone where plant food is necessary. Before planting see that all roots are in proper condition. Cut off broken or straggly roots.

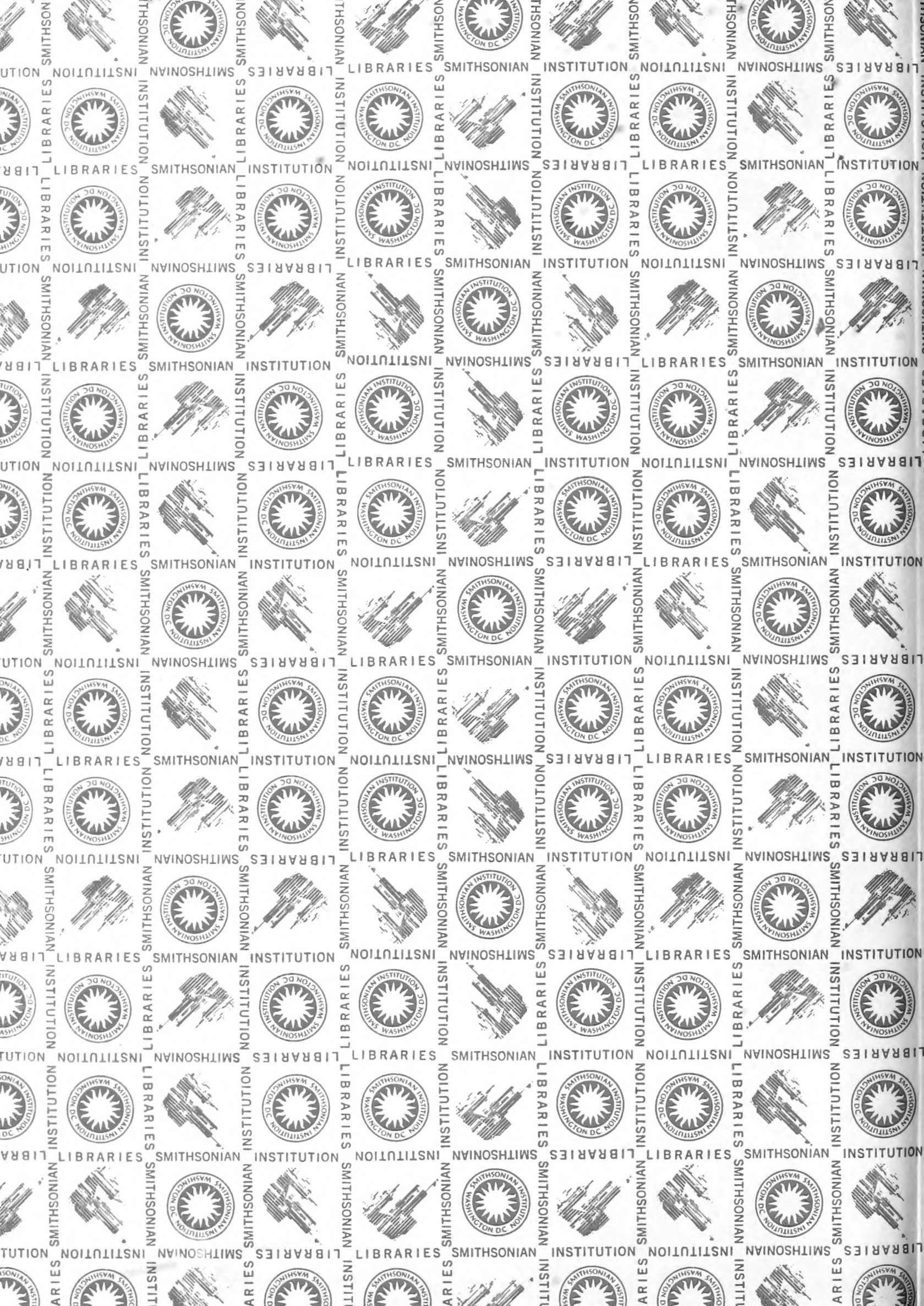
Prepare holes for shrubs and put in plant food. Keep roots moist. Most perennials that form in clumps or crowns should be set out so that the tops are about level with, or slightly lower than, the surface. Firm in soil about roots. Tag all plants.

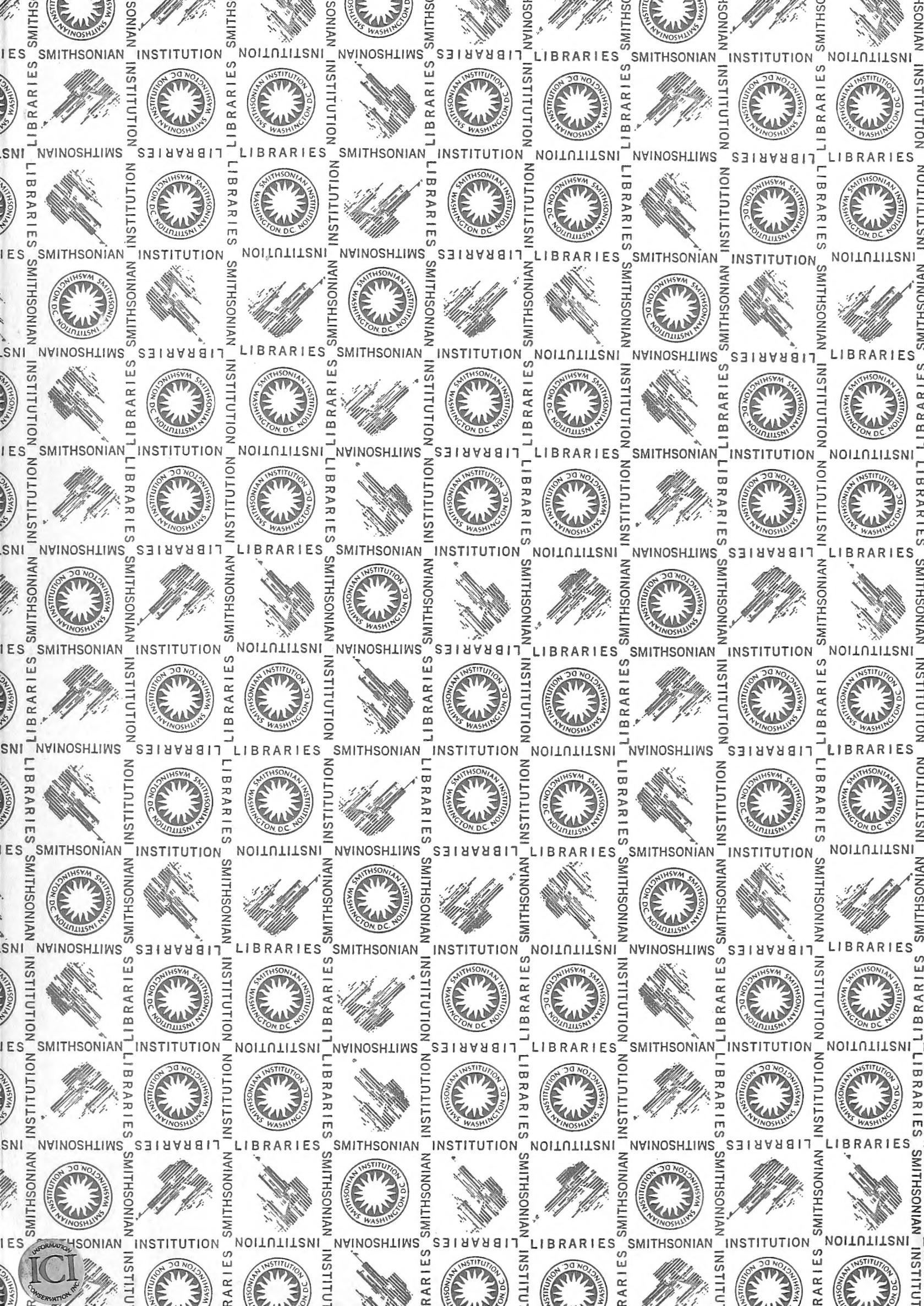
After soil is well frozen, apply winter mulch. This protects plants from weight of snow and prevents premature root growth. Use fine, dry manure, marsh hay, dry stable litter or leaves. A depth of 3" to 5" is sufficient.

Of the larger fruits, apples and pears may be set out now, but cherries, peaches and plums should be left until spring. Of the small fruits, raspberries, blackberries, gooseberries and currants may be set out to advantage this fall.



The Women's National Farm & Garden Association, Mrs. Francis King, Pres., 414 Madison Ave., New York City.





SMITHSONIAN INSTITUTION LIBRARIES



3 9088 00821 9453